



GOVERNMENT OF TAMILNADU

SYLLABUS

ADD-ON TECHNICAL COURSES

FOR

GOVERNMENT ARTS AND SCIENCE COLLEGES

DIRECTORATE OF TECHNICAL EDUCATION

TAMILNADU

ADD-ON TECHNICAL COURSES SYLLABUS COMMITTEE

Thiru S. Govindarajan, Asst. Director (Exams.) : Coordinator
Directorate of Technical Education, Chennai – 25.

Dr. K. Sundaramurthy, Principal,
Dr. Dharamambal Govt. Poly. College for Women
Chennai – 113. : Convenor

Members

A. Computer Related Courses:

1. Computer Network
2. C. Programming
3. Hardware Servicing
4. Internet
5. Multimedia
6. Dot Net
7. Visual Basic Programming
8. Web Designing & Animation
9. Web Designing
10. Auto CAD

Thiru D. Arulsevram, H.O.D. (CE)
Theagarayar Poly. College, Salem

Thiru V. G. Ravindran, S.L. (CE)
Seshasayee Inst. of Technology, Trichi.

Tmt. M. Usha, S.L(CE)
DOTE, Chennai.

B. Commerce Related Courses:

11. Desk Top Publishing
12. Ecommerce
13. Financial Management
14. Front Office Management
15. Insurance
16. Office Automation
17. Principles of Tally
18. Public Relation Management
19. Salesmanship Women, Chennai .
20. Secretaryship

Thiru V. Gopi, H.O.D./c (MOP)
Dr. Dharmambal Govt. Poly. For
Women, Chennai .

Tmt. R. Kanakarajammal, Lecturer (MOP)
Dr. Dharmambal Govt. Poly. For
Women, Chennai.

C. Cosmetology Courses:

21. Beautician
22. Cosmetology
23. Herbal Beauty
24. Jewel Appraisal

Tmt. P. Nagamma, Sr. Lect. (Cosmetology)
Dr. Dharmambal Govt. Poly. For Women, Chennai.
Tmt. M.R. Ramamani, Lect.(Cosmetology)
Dr. Dharmambal Govt. Poly. For Women, Chennai.

D. 25. Industrial Chemistry

Thiru K. Janardhanam, Principal I/c
Institute of Chemical Technology, Chennai.

E. Textile Related Courses:

- 26. Computer Aided Color Making
- 27. Fabric Dyeing and Printing
- 28. Fashion Designing
- 29. Garment Quality Inspection & Export Merchandising
- 30. Textile Dyeing
- 31. Textile Processing and Computer Color matching

Thiru K. Sukumar, H.O.D.(Textile)
SSM Inst. of Technology,
Komarapalayam, Erode.

F. Civil Related Courses:

- 32. Environmental & Pollution Control
- 33. Geographical Information System

Tmt. K. Lakshmi, Sr. Lecturer (Civil)
Dr. Dharmambal Govt. Poly. For Women, Chennai.

G. Electrical & Electronics Related Courses:

- 34. PCB making
- 35. Servicing of Audio & Video Equipment
- 36. Domestic Wiring
- 37. Servicing of Domestic apparatus

Tmt. Visalakshi, CIICP Coordinator
DOTE, Chennai.

H. Communication Skills (English) & Others:

- 38. Communication Skill
- 39. ISO 9000 & TQM
- 40. Crisis Management

Tmt. Champaka Rani, Sr. Lecturer (Eng.)

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LIST OF ADD ON TECHNICAL COURSES

Sl. No.	Name of the Certificate Courses Offered	Duration	No. of Contact Hours	Page
REGULATIONS				6
1.	Auto CAD	6 months	96	9
2.	Beautician (Women candidates only)	6 month	96	13
3.	Communication skills	6 months	96	17
4.	Computer Aided Color Matching	6 months	96	21
5.	Computer Network	6 months	96	25
6.	Cosmetology (Women candidates only)	6 months	96	29
7.	C – Programming	6 months	96	33
8.	Crisis Management	6 months	96	38
9.	Desk Top Publishing	1 year	192	41
10.	Domestic Wiring	6 months	96	46
11.	E – Commerce	6 months	96	49
12.	Environment and Pollution Control	6 months	96	51
13.	Fabric Dyeing and Printing	1 year	192	54
14.	Fashion Designing	6 months	96	60
15.	Financial Management	6 months	96	65
16.	Front Office Management	6 months	96	68
17.	Garment Quality Inspection and Export Merchandising	6 months	96	71
18.	Geographical Information System	6 months	96	75
19.	Hardware Servicing	1 year	192	79
20.	Herbal Beauty and Aroma Therapy (Women only)	6 months	96	86
21.	Industrial Chemistry	6 months	96	90
22.	Insurance	6 month	96	94
23.	Internet	6 months	96	97
24.	ISO and TQM	6 months	96	101
25.	Jewel Appraisal	6 months	96	103
26.	Multimedia	6 months	96	107
27.	Dot Net	6 months	96	112
28.	Office Automation	6 months	96	116
29.	PCB Making	6 months	96	131

Sl. No.	Name of the Certificate Courses Offered	Duration	No. of Contact Hours	Page
30.	Principles using Tally	6 months	96	135
31.	Public Relation Management	6 months	96	157
32.	Salesmanship	6 months	96	159
33.	Secretary ship	6 months	96	162
34.	Servicing of Audio and Video Equipments	1 year	192	165
35.	Servicing of Domestic Appliances	6 months	96	168
36.	Textile Dyeing	1 year	192	171
37.	Textile Processing and Computer Color Matching	6 months	96	177
38.	Visual Basic Programming	6 months	96	182
39.	WEB Design	6 months	96	187
40.	WEB Designing and Animation	6 months	96	192
41.	Textile CAD	6 months	96	197
42.	Apparel Marketing & Merchandising	6 months	96	200
43.	Pattern Making & Grading	6 months	96	203
44.	Export Management	6 months	96	206
45.	Knitted Garment Production	6 months	96	209
46.	Training & Sewing	6 months	96	212
47.	Embroidery CAD	6 months	96	216
48.	Fashion CAD	6 months	96	220
49.	Apparel Quality Management	6 months	96	224
50.	Automotive Engineering	1 year	192	227
51.	Ceramics – White ware and Pottery	6 months	96	230
-	Application Format (Specimen)	-	-	233

**ADD-ON TECHNICAL COURSES FOR THE STUDENTS OF
ARTS & SCIENCE COLLEGES
(Certificate Courses of 6 Months and 1 Year duration)**

REGULATIONS

1. Introduction:

The Hon'ble Minister for Higher Education has announced in the Legislative Assembly, while moving the demand for grant for Higher Education in the year 2007 - 2008, that Add-on Technical Courses would be conducted in Polytechnic Colleges for the benefit of students of Govt. Arts and Science Colleges in the State to enhance their employable opportunity.

Under this Scheme, the Students of Arts & Science Colleges will get an opportunity to undergo additional Job-oriented, Technical, Short-Term Course in Polytechnic Colleges during holidays and evening hours along with their regular Degree Courses.

The main objectives of the Courses are to enhance the Technical Skills and the Employment potentiality of Students of Arts & Science Colleges for better placement. To this effect the Govt. of Tamil Nadu have issued a G.O.(MS) No. 197 Higher Education (G1) dt. 22.06.2009.

2. Description of the Courses:

a. Certificate Course (Six Months):

The course is of 96 hours duration of study for the period of six months. The classes will be conducted on week end holidays (Saturdays and Sundays) or any of the working days in the evening for two hours duration per day. Thus the classes will be conducted for 4 hours per week (24 weeks X 4 hours per week = 96 hrs) to complete the specified Syllabus.

Certificate Course (One Year):

The course is of 192 hours duration of study for the period of twelve months. The classes will be conducted on week end holidays (Saturdays and Sundays) or any of the working days in the evening for two hours duration per day. Thus Classes will be conducted for 4 hours per week (48 weeks X 4 hours per week = 192 hrs) to complete the specified Syllabus.

3. Eligibility for Admission:

Second & Third Year regular under graduate students of Govt. Arts & Science Colleges of TamilNadu attached to the respective Polytechnic Colleges as specified in G.O.

4. Attendance:

80 % attendance is mandatory to appear for the Board Theory and Practical Examinations conducted by the State Board of Technical Education & Training . If any candidate fails to

acquire 80% of the attendance, then they have to forego their candidature and seek admission again afresh

5. Examinations:

Common Board Examinations for all the Certificate Courses under Add-on Technical Course Scheme will be conducted by the State Board of Technical Education & Training at the end of course duration i.e. 6 months or 1 Year as the case may be. Generally for the Six Month Certificate Courses the Board Examination will be conducted twice in a year during the month of **April** as well as in the month of **October**, where as for the One Year Certificate Courses the Board Examination will be conducted only in the month of **April** as indicated in the Government Order.

For the Practical Component of the certificate course:

The Record mark Calculation for Practical component is to be done as follows:-

a)	Procedure/ observation and tabulation/ Other Practical related Work	:	5 Marks
c)	Result	:	2 Marks
d)	Record writing	:	3 Marks

	TOTAL	:	10 Marks

- The Record for every completed exercise should be submitted in the subsequent Practical classes and marks should be awarded for 10 for each exercise as per the above allocation.
- At the end of the Course, the average marks of all the exercises should be calculated for 10 marks.

6. Pattern of the Question Paper:

a. For the Certificate Courses with Practical Components:

I. The Theory Question Paper will contain the 2 parts viz. Part A & Part B, the duration of the theory examination will be 2 hours and the maximum marks will be 50.

Under **Part A** 15 questions will be given by choosing **three** questions in each unit / chapter, out of which 10 question will have to be answered and each question will carry 2 marks (10 x 2 = 20).

Under **Part B** 5 questions will be given in either or pattern by choosing **two** questions from each unit / chapter. Each question will carry 6 marks (5 x 6 = 30)

Part A	10 questions X 2 marks	=	20 marks
Part B	5 questions X 6 marks	=	30 marks

Total		=	50 marks

II. The Practical Examination will be of 2 hours duration and the maximum marks will be 50.

The Record marks	= 10 marks
The Board practical examination	= 40 marks

Total	= 50 marks

b. For the Certificates Courses without Practical Components:

I. The Theory Question Paper will contain the 2 parts viz. Part A & Part B, the duration of the theory examination will be 3 hours and the maximum marks will be 100.

Under **Part A** 15 questions will be given by choosing **three** questions in each unit / chapter, out of which 10 question will have to be answered and each question will carry 4 marks (10 x 4 = 40).

Under **Part B** 5 questions will be given in either or pattern by choosing **two** questions from each unit / chapter. Each question will carry 12 marks (5 x 12 = 60)

Part A	10 questions X 4 marks	= 40 marks
Part B	5 questions X 12 marks	= 60 marks

Total		= 100 marks

6. Criteria for Pass:

- i. A candidate shall be declared to have passed the examination in a course if he/she secures not less than **40% in theory component and 50% in practical component if any** out of the total prescribed maximum marks.
- ii. If a candidate fails in Board Examinations, he/she has to re do entire Course again by paying the prescribed fees for appearing in the subsequent Board Examinations.

7. Award of Certificate:

No candidate shall be eligible for the Certificate unless he/she has undergone the prescribed course of study for a period of not less than 6 months or 1 Year in an academic year in any Institution (Polytechnic College) attached to the Govt. Arts and Science Colleges of Tamil Nadu. The Certificate will be issued for the passed candidates under the Seal of State Board of Technical Education. and Training.

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001-AUTOCAD

MODEL QUESTION PAPER

Time: 2 Hrs

Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions, All questions carry equal marks.

1. Write down the different types of coordinate method
2. Write down the purpose of PLINE command
3. Write down the different options available in HATCH command
4. Write down the purpose of polar and rectangular array
5. How will you change the arrow style
6. What applications Blocks are mostly used. Give an example
7. Can animation possible in autocad
8. Write down the purpose of TABSURF
9. Write down the purpose of EDGESURF
10. What is the difference between UNION and subtract
11. Bring out the difference between extrude and extend
12. How will you assign texture to the objects
13. What is rendering an object
14. How will you assign a material to the object
15. How attributes are added to the objects.

PART – B

(5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

1. A) Draw the given diagram using three methods of coordinate system
(or)
B) Explain the sequence of steps involved in the relative and polar coordinate method of drawing
2. A) Explain with suitable sketches the purpose of Trim, fillet and chamfer commands
(or)
B) Explain with suitable diagram the usage of array commands

3. A) Explain dimensioning and options available.
(or)
B) Prepare a bill of materials with the attributes assigned the drawn objects
4. A) Discuss in detail about the layer concept
(or)
B) Write down the relevant steps to convert lines to polylines and ply lines to lines with the relevant sketches
5. A) Draw the given diagram using UCS
(or)
B) Explain any five commands used for 3D drawing

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**001-AUTOCAD
PRACTICAL (60 Hours)**

1. Draw the given drawing using absolute coordinate method
2. Draw the given drawing using relative method
3. Draw the given drawing using polar method
4. Drawing for arcs and circles
5. Draw the given drawing using array command
6. Drawing for line type and curved objects
7. Exercise for PLINE and PEDIT
8. Drawing for Mirror and Hatch commands
9. Drawing for blocks
10. Draw the given diagram in different layers which are having different colors and linetype
11. Drawing for dimensioning
12. Exercise for TABSURF AND EDGESURF
13. Exercise for surface modeling and paper space
14. Exercise for solid modeling
15. Exercise for suing attributes

002-BEAUTICIAN

MODEL QUESTION PAPER – I

Time: 2 Hrs

Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions, All questions carry equal marks.

1. what is myology?
2. What is dermatology?
3. What is trichology?
4. Define manicure and pedicure.
5. What is meant by foundation?
6. How do you apply make up for diamond shape face?
7. Mention the properties of hair.
8. Mention the basics of hair.
9. Why it is necessary to give test curl?
10. Differentiate between mask and pack.
11. What is meant by hand manipulation?
12. Differentiate between couperous skin & oily skin.
13. How the cosmetics are classified?
14. Mention the ingredients used in beauty cosmetics.
15. Define emulsion.

PART – B

(5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

1. A. Explain the disorder of skin, hair and nails treated by beautician.
OR
B. Describe the importance of good grooming.
2. A. Write in details about pedicure.
OR
B. Explain in details about professional make up techniques.
3. A. Describe the perming procedure.
OR
B. Write the procedure for hair colouring.
4. A. Describe the standard massage strokes for the face with sketch.
OR
B. Enumerate the salient features of relaxing massage.
5. A. Write in detail about the classification of cosmetics.
OR
B. What are the precautions to be followed while preparing the emulsion cosmetics?

002-BEAUTICIAN

MODEL QUESTION PAPER – II

Time: 2 Hrs

Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions, All questions carry equal marks.

1. what is onychology?
2. What is nutrition?
3. Distinguish between vitamins and minerals.
4. How do you apply make up for heart shape face?
5. mention the precautions to be followed before eyebrow shaping.
6. List out the materials for mehndi designing.
7. Define hair cutting.
8. Differentiate between hair pressing and perming.
9. Differentiate between hair colouring and streaking .
10. Mention the massage movements which helps to reduce the fatty tissues.
11. Differentiate between herbal and chemical bleaching.
12. List out the diet for healthy skin.
13. Mention the types of cosmetics.
14. List out the herbal cosmetics.
15. Define ph scale.

PART – B

(5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

1. A. Explain the action of muscular system.
OR
B. Mention the healthy diet for skin, hair, nail & tooth.
2. A. Describe the various types of foundation used in make up.
OR
B. Explain in detail about mehndi designing.
3. A. Describe the various method of hair care.
OR
B. Write in detail about hair shaping.
4. A. Describe galvanic facial.
OR
B. Narrate the difference between pack and mask.
5. A. write in detail about the importance of herbal cosmetics.
OR
B. Mention the common ingredients used in cosmetics.

**002-BEAUTICIAN
PRACTICAL (60 Hours)**

1. Galvanic facial
2. Professional facial
3. Waxing
4. Bleaching
5. High frequency facial
6. Gold facial
7. Body massage
8. Bridal make up
9. Threading
10. Mehandhi designing
11. Manicure
12. Pedicure
13. Head massage
14. Hair designing 6 types
15. Hair shaping 3 types (u&v, children cutting)
16. Hair coloring
17. Hair perming
18. Hair pressing
19. Preparation of hair oil, shampoo, cuticle & skin cream)
20. Preparation of utility cosmetics

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**DEPARTMENT OF TECHNICAL EDUCATION
GUINDY, CHENNAI – 25
ADD-ON TECHNICAL COURSE**

003-COMMUNICATION SKILLS

Duration	: 6 Months	Hours : 2 Hours per day
Classes	: Two days per week	Total Hours : 96

COURSE CONTENT (Theory & Practical)

UNIT – I PRONUNCIATION: (FOR PRACTICALS: PART 1)

1. Pronouncing words correctly –articulating words with accent on the right syllable.
2. Problems in pronunciation .
3. Word stress in words of many syllables, sentence stress, weak forms, contracted forms, unstressed pronouns, stress in compound words, stress in words used as different parts of speech.
4. Intonation.

UNIT – II UNDERSTANDING COMMUNICATION: (FOR PRACTICALS: PART 2)

1. Understanding Communication.
2. Greeting and Introducing.
3. Making Requests.
4. Asking and Giving Permission.
5. Offering Help.
6. Giving Instruction and Directions.

UNIT – III TELEPHONE COMMUNICATION: (FOR PRACTICALS: PART 3)

1. Understanding Telephone Communication.
2. Handling Calls.
3. Leaving Message.
4. Making Requests.
5. Asking for and Giving Information.
6. Giving Instructions.

UNIT IV LISTENING: (FOR PRACTICALS: PART 4)

1. Listening to Talks and Description.
2. Listening to Announcements.
3. Listening to News on the Radio and Televisions.
4. Listening to Casual Conversations.

UNIT V SPEAKING:

(FOR PRACTICALS: PART 5)

1. Art of Small Talk.
2. Participating in Conversations.
3. Making a Short Formal Speech.
4. Describing People, Places, and Events & Things.

Books & Authors

Exercises in Spoken English.

Department of Phonetics and Spoken English Central Institute of English and Foreign Language. Hyderabad.

BBC Beginner's English by Judy Garton Sprenger and Simon Greenall.

A course in Listening and Speaking 1&2 by

Prof. V. Sasikumar, Dr.P.Kiranmani Dutt and Ms.Geetha Rajeevan

Cambridge University Press India Pvt Ltd

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**003 COMMUNICATION SKILLS
MODEL QUESTION PAPER-I**

Time: 2 Hrs

Marks: 50

PART – A

(10 x 2 = 20 Marks)

Answer any TEN questions. All questions carry equal marks.

1. What do you think is the difference between listening and hearing?
2. What is Communication?
3. What are the barriers to listening?
4. Who is an active listener?
5. What is word stress?
6. Define etiquette.
7. Give 2 expressions to express agreement.
8. How can you describe an object?
9. Give 2 examples of intellectual ability.
10. Give 2 useful phrases for seeking clarifications.
11. What are the challenges of communication?
12. Give 2 examples of direct instruction beginning with a verb.
13. Give 2 examples of indirect instruction in the form of a request.
14. What are the expressions used to ask for help when you need help from someone?
15. List out the various forms of greeting people.

PART - B

(5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

1. A. What is Communication? When does communication take place?
OR
B. What are the essentials of effective communication?
2. A. You are attending a walk in interview for a job in a multinational company.
How would you introduce yourself?
OR
B. You are meeting a popular TV news reader. How would you introduce yourself?
3. A. How to use a cassette player? Give instructions
OR
B. How to use a mobile phone? Give instructions.
4. A. Give five useful expressions for communication and explain the meaning for each expression.
OR
B. Give five reasons for gaps in communication.
5. A. Describe the three stages of making a short formal speech.
OR
B. While delivering welcome address, what are the minute details to be observed?

003 COMMUNICATION SKILLS

PRACTICAL

MODEL QUESTION PAPER

(Merely for reference)

Time: 2 Hrs

Marks: 40

PART - A

I Listen to the following sentences. Put a tick mark (✓) against the word you hear. **5**

1. He wants to **sell/sail** his boat.
2. Doctor, please treat my **cut/cat**.
3. That's an expressive **cap/cup**.
4. Something has happened to her **hat/heart**.
5. She's got a **pen/pain** in her hand.

II Listen to this anecdote and answer the questions. **5**

Pause 1

- a. What do you infer about the narrator's capabilities?

He is capable of _____

- b. How many of these are true about him? Strike off the irrelevant ones.

He is generous/ compassionate/ miserly/ hardworking/ intelligent

Pause 2

- c. He was the only person undergoing training.

True/False.

Pause 3

- d. What do you know about the women?

She is intelligent/ slow to understand/ clever/ witty.

III What would you say in each of their situations? Use suitable expressions. **5**

- (i) You can't hear the other person.
- (ii) You want him/her to repeat something.

IV Give instructions to your partner to do the following. **5**

- (i) Grocery Shopping.
- (ii) Giving Direction.

PART - B

Make a short formal speech on any one of the following. **20**

1. A Farewell Speech.
2. Propose a Vote of thanks at the close of a formal event.
3. Welcome Address.

DEPARTMENT OF TECHNICAL EDUCATION
GUINDY, CHENNAI – 25
ADD-ON TECHNICAL COURSE
004- COMPUTER AIDED COLOUR MATCHING

Duration : 6 Months **Hours : 2 Hours per day**
Classes : Two days per week **Total Hours : 96**

THEORY (30 Hours)

Unit I :Chemical Preparation **6 Hrs**

Sequence of process involved in textile processing of cotton Woven and Knitted fabrics and Yarn Object of singeing – Principal of enzymatic desizing - Mechanism of scouring – Scouring using jigger –Bleaching with hydrogen peroxide – Mercerization and it's importance.

Unit II : Basics of Colouration of Textile **6 Hrs**

Classification of colorants –Theory of coloration functional groups in fibre –Force responsible for fixation –Role of auxiliaries in dyeing –Definition of terms like Exhaustion, Expression,% shade ,M:L ratio -Effect of temp & time of dyeing.

Unit III : Introduction of Colour & Colouration **6 Hrs**

Theory of Colour –Perception of Colour in terms of source of light, Object of observer-Colour mixing laws (Additive & Subtractive)-Description of Colour in terms of Hue value & Chroma- Colour order systems (Munsell ,CIE system)-CIE- Tristimuls value – L, A,B value –whiteness Assessment .

Unit IV : Colour Difference & Theory of Colour Matching **6 Hrs**

Metamerism – Types of Metamerism – Colour difference – Colour difference equations – Kubelka Munk theory of color matching – Arriving formula for prediction of Colour recipe using three wavelengths data –Colour matching using 16 points – Colour measuring instruments -Spectrophotometer – Commercially available Colour matching softwares.

Unit V : Colour Matching & Dyeing **6 Hrs**

Configuration and application of CCM - Steps involved in recipe prediction using CCM – dyeing procedure using predicted recipe (Reactive dyes only)– Colour difference measurement – pass / fail test – Correction to the recipe –Fastness testing Colour strength measurement – Uses of reflectance curves – Advantages of computer Colour matching system.

004-COMPUTER AIDED COLOUR MATCHING

MODEL QUESTION PAPER

Time: 2 Hrs

Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions, All questions carry equal marks.

1. Give the sequence of process involved in wet processing of woven fabric
2. Give the object of singeing
3. Give the recipe for mercerization
4. What are the functional groups present in cotton and wool fiber.
5. Define I) Exhaustion II) M: L Ratio
6. What is the effect of temperature on time of dyeing
7. State additive law of Colour mixing
8. What are the tristimulus value?
9. Define Hue
10. What is Metamerism?
11. What is Kubelka Munk theory?
12. Mention a few Colour matching software available in the market
13. What is the use of pass/ fail test
14. What do you understand by Colour strength?
15. What are the advantages of computer Colour matching system?

PART – B

(5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

1. a. How do you carry out scouring of cotton fabric using jigger?
(Or)
b. Describe the process of bleaching of cotton fabric using hydrogen peroxide
2. a. Explain the theory of coloration with reference to steps involved in dyeing
(Or)
b. Discuss about the role of different auxiliaries used in dyeing
3. a. Describe how you will perceive color in terms of source of light, object and observer.
(Or)
b. Explain the color order systems that find application in dyeing describe the Colour
4. a. Explain the different type of Metamerism in detail
(Or)
b. Explain the process of arriving the formula for predicting color recipe using three wavelengths data.
5. a. Describe the process of dyeing of cotton fabric using any one brand of the predicted recipe
(Or)

- b. Discuss how will you measure fastness of dyed material to different agencies using computer color matching system.

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004-COMPUTER AIDED COLOUR MATCHING PRACTICAL (66 Hours)

List of Experiments

1. Desizing of cotton fabric using enzymes
2. Scouring of cotton fabric using caustic soda
3. Bleaching of cotton fabric using H₂O₂
4. Dyeing of cotton fabric using hot brand reactive dyes
5. Dyeing of cotton fabric using cold brand reactive dyes
6. dyeing of cotton fabric using ME brand reactive dyes
7. Measurement of whiteness index and yellowness index of bleached fabric using CCM
8. Prediction of recipe for a fabric sample using CCM
9. Dyeing using predicted recipe and test for color difference and pass / fail of the dyed sample
10. Measurement of Metamerism index and tristimulus value of the dyed fabric
11. Correction of predicted recipe if the dyed sample fails
12. Measurement of wash fastness using CCM
13. Measurement of rubbing fastness using CCM
14. Measurement of perspiration fastness using CCM
15. Measurement of light fastness using CCM

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

005-COMPUTER NETWORK

Duration : 6 Months
Classes : Two days per week

Hours: 2 Hours per day
Total Hours : 96

THEORY (36 Hours)

Unit – I

Data Communication:

Components - Directions of data flow simplex – duplex – Types of connection – Topology – Mesh star – Bus, Ring

Network Categories – LAN- MAN – WAN – Inter networks

Protocols and standards

Transmission media – coaxial cable – Fiber-optic cable - UTP cables - RS-232 interfacing techniques DTE- DCE Modems standards

Client/Server networks Computer port

Unit – II

Computer Networking :

Types of networking equipments - Routers vs. Hubs vs. Switches - Wireless Network

Hardware Network Adapters – PCI – PCMCIA – USB adapter – Integrated wireless adapter – installing

Network Cables – Direct cable – patch cables – Ethernet cross over cables – CAT5 CAT6 – RJ-45 connectors

Modem internal external cable modem DSL ADSL

Unit – III

TCP/IP networking:

What is TCP/IP? Benefits of networking - File and print sharing – internet connection sharing – multiplayer games internet telephone service home entertainment

IP address – MAC address – working with IP address – subnet mask - TCP/IP packets – lifetime - TCP /IP well known ports 7,9,11,13,17,19,20,21,23,25,53,67,79,80,111

TCP/IP administration and troubleshooting XP ping ipconfig host name- tracert- ARP - Route

Unit – IV

Wireless networking :

What is wireless network - limitations bandwidth reliability power security

Wireless Standards - 802.11b 802.11a 802.11g and 802.11n – Comparison of properties -

Operations Frequency - Throughput (typ.) Net Bit Rate (max.) Gross Bit Rate (max.) Max Indoor Range Max Outdoor Range

Blue tooth technology piconet wireless bluetooth headsets iPhone bluetooth .

Unit – V

Networking operating system Client/Server arrangement:

Windows XP – system requirement – partitioning the HDD – Installation – Configuring the network connection - Workgroup network – Domain network
Windows 2003 server – installation – Domain controller – user creation - login – DHCP – Remote desktop - Linux OS installation – partitioning

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

**005-COMPUTER NETWORK
Model Question Paper**

Duration : 2 Hrs.

Maximum marks:50

Part – A

10 x 2 = 20

Answer any 10 of the following in short, All questions carry equal Marks

1. What is data communication? What are the characteristics?
2. Differentiate simplex and duplex.
3. What are the three connectors in optical fiber?
4. List any two types of networking equipment.
5. What is a patch cable?
6. What is a Modem?
7. What is TCP?
8. What is file sharing?
9. List any 3 popular TCP ports.
10. State any two limitations of wireless network.
11. Define 802.11b standard
12. What is piconet?
13. What is a client?
14. What is a server?
15. What is a Domain controller?

Part – B

5 x 6 = 30

Answer all the questions by choosing either A or B of each question:

16. A. What is topology? Explain the categories.
(OR)
B. Briefly discuss RS232 with example.
17. A. Discuss the types of Network adapters.
(OR)
B. Write in detail on wireless networking hardware.
18. A. Write detailed notes on: IP address
(OR)
B. List and discuss any 3 TCP/IP troubleshooting XP commands.
19. A. Explain in detail about Wireless network.
(OR)
B. Compare the properties of different standards of wireless network.
- 20.. A. List down the steps for installation of XP.
(OR)
B. How will you install DHCP server in a 2003 server?

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

005-COMPUTER NETWORK

PRACTICAL (60 Hours)

Lab Exercises

1. Connect a computer with a switch using CAT 5 straight cable.
2. Connect a computer with a Hub using CAT 5 cross cable.
3. Connect a Hub to other Hub CAT cable.
4. Build a wireless network using a wireless NIC card and WAP.
5. Establish a computer network using blue-tooth dongles.
6. Practice the XP network trouble shooting commands : ping, tracert, ipconfig,arp
7. Install windows XP operating in a client machine.
8. Configure static IP in a client machine.
9. Configure a client machine as DHCP client.
10. Install Windows 2003 in a Server machine.
11. Convert a system running 2003 into a Domain controller.
12. Install DHCP server in a DC.
13. Create a user in 2003 server and connect from a client machine.
14. Install Linux in a Server machine.
15. Connect to Linux server from a linux client.

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DEPARTMENT OF TECHNICAL EDUCATION
GUINDY, CHENNAI – 25
ADD-ON TECHNICAL COURSE FOR WOMEN CANDIDATES ONLY
006-COSMETOLOGY

Duration : 6 Months **Hours : 2 Hours per day**
Classes : Two days per week **Total Hours : 96**
THEORY (36 Hours)

COURSE CONTENT	:	<ol style="list-style-type: none">1. Medical cosmetology2. Art of make up3. Physique care4. Hair dressing5. Business psychology
UNIT I		<ol style="list-style-type: none">1. Basic study of anatomy and physiology2. Study of allergic dermatitis3. Study of disorder of skin, hair& nail4. Study of dietitics & nutrition5. Study of enviromental enemies of the skin
UNIT II		<ol style="list-style-type: none">1. Study of professional make up techniques2. Study of face care before make up3. Study of film & t.v make up4. Study of raw materials present in the facial cosmetics5. Study of spa manicure & spa pedicure
UNIT III		<ol style="list-style-type: none">1. Study of skin care in different season2. Study of electrotherapy3. Study of professional facial4. Study of pack and mask application5. Study of body massage
UNIT IV		<ol style="list-style-type: none">1. Study of trichology2. Study of cosmetics ,tools, equipment required in hair dressing salon3. Study of hair care4. Study of hair cutting and its techniques5. Study of hair problems corrected by trichologist
UNIT V		<ol style="list-style-type: none">1. Study of good grooming2. Study of professional ethics for the cosmetologist3. Study of career opportunities for thecosmetologist4. Study of beauty clinic planning5. Study of entrepreneurial skill development

006-COSMETOLOGY

MODEL QUESTION PAPER – I

Time: 2 Hrs

Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions, All questions carry equal marks.

1. What is neurology?
2. what is physiology?
3. what are the important of nutrition?
4. define spa manicure.
5. Mention the types of cleansing.
6. Mention the raw materials required in facial Cosmetics.
7. What is meant by hand manipulation?
8. How do you operate facial steamer?
9. How do you treat combination skin?
10. Mention the implements used combing & brushing.
11. How do you do hair styling for diamond shape face?
12. How do you use blow dryer?
13. Mention the 5 tips of good grooming.
14. How do you maintain the correct posture?
15. Mention ethics for beautician.

PART – B

(5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

1. A. Explain the disorder of skin, hair and nails.
OR
B. Describe the cranial nerves.
2. A. Differentiate between film makeup & t.v makeup.
OR
B. Describe the face care before make up.
3. A. How do take care of the skin for different seasons.
OR
B. Describe the high frequency treatment and its effect.
4. A. Describe the cosmetics, tools & equipment in hair dressing salon.
OR
B. Explain the hair problems to be treated by trichologist.
5. A. Describe the importance of good grooming.
OR
B. Write in details about the professional ethics.

006-COSMETOLOGY

MODEL QUESTION PAPER – II

Time: 2 Hrs

Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions, All questions carry equal marks.

1. Define allergic dermatitis.
2. Mention the nail disorder.
3. Mention the hair disorder.
4. Define spa pedicure.
5. List out the any 5 film make up materials.
6. How do apply make up for oblong face?
7. Mention the massage strokes which gives soothing effect.
8. Write short notes on herbal bleaching.
9. Write short notes on fundamental of electricity.
10. How do you do hair style for square face?
11. Mention the hair problems treated by trichologist.
12. Define hair cutting.
13. Mention the avenues available for cosmetologist.
14. What are the factors to be adopted for beauty clinic planning?
15. Is it necessary cosmetologist to study entrepreneurial development programme?

PART – B

(5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

1. A. Define nutrition, explain the balanced diet to be become healthy person.

OR

- B. Describe the environmental enemies for the skin.

2. A. Mention the rules and regulations to be followed by a make up artist.

OR

- B. Describe the spa pedicure.

3. A. Mention the types of mask and pack.

OR

- B. Describe the relaxing body massage strokes.

4. A. Elaborate the different types of hair cutting it techniques.

OR

- B. How do you analyse the hair?

5. A. Describe the various placement avenues for cosmetlogist.

OR

- B. Write in detail about beauty clinic planning.

006-COSMETOLOGY
PRACTICAL (60 Hours)

1. Threading
2. Waxing
3. Bridal make up
4. T.v.make up
5. Stage make up
6. Spa manicure
7. Spa pedicure
8. Traditional & arabic mehandhi designing
9. Birdal decoration
10. Professional facial
11. Spa facial
12. Pimple facial with high frequency machine
13. Body relaxing
14. Spa scalp massage
15. Classification of curls (bunch of curls,pineapple,flat curls twist
&french plaits
16. Perming
17. Hair colouring
18. Hair pressing
19. Preparation of hair oil & shampoo
20. Preparation of face pack, crack cream & skin cream

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
007- C PROGRAMMING**

Duration : 6 Months
Classes : Two days per week

Hours : 2 Hours per day
Total Hours : 96

THEORY (36 Hours)

Unit I

Introduction :

Features of C - The History of C - Standard C vs. K&R C - A C Program - The Format of C - Variables - printf and scanf - Integer Types in C - Integer Example - Character Example - Integers with different bases - Real types in C - Real Example - Constants - Warning - Named Constants - Preprocessor Constants .

Operators in C:

Operators in C - Arithmetic Operators - Using Arithmetic Operators - The Cast Operator - Increment and Decrement - Prefix and Postfix - Truth in C - Comparison Operators - Logical Operators - Logical Operators - Bitwise Operators - Bitwise Example - Assignment - Other Assignment Operators – size of Operator - Conditional Expression Operator - Precedence of Operators - Associativity - Precedence/Associativity Table

Unit II

Control Flow

Control Flow - Decisions if then - if then else - Nesting ifs - switch - More about switch - while loop - Semicolon Warning! - while, not until! - do while - for loop - for is not until either! - Stepping with for - Extending the for loop - break - continue.

Unit III

Functions

The Rules Writing a Function - Calling a Function - Prototypes - Call by Value - Call by Value - C and the Stack - Stack Example - Storage - auto - static - register - Global Variables

Pointers

Pointers - Declaring Pointers - Example Pointer Declarations - The "&" Operator - Rules The "*" Operator - Writing Down Pointers - Call by Value - Reminder - Call by Reference - Pointers to Pointers

Unit IV

Arrays in C

Declaring Arrays - Accessing Elements - Array Names - Passing Arrays to Functions – Strings - Printing Strings - Null Really Does Mark the End! - Assigning to Strings - Pointing to Strings - Multidimensional Arrays

Structures in C

Concepts - Setting up the Template - Creating Instances - Initializing Instances - Structures Within Structures - Accessing Members - Pointers to Structures -

UNIT V

Handling Files in C

Introduction - Streams - What is a Stream? - Why stdout and stderr? - stdin is Line

Buffered - Opening Files - Dealing with Errors - File Access Problem - Copying Files -

Convenience Problem - Accessing the Command Line - Useful Routines - Binary Files

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
007- C PROGRAMMING**

MODEL QUESTION PAPER

Time: 2 Hrs

MAX. Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions:

1. Give the format of scanf statement
2. How will you declare integer constant. Illustrat with an example
3. Give the format for printf statement
4. With an example differentiate between pre and post incrementors
5. List down the logical operators and their notations
6. State whether true or false:
 - a) "Members of a structure must be of the same datatype"
 - b) "When an array is passed to a function, the array elements are copied in to the parameter of the function"
7. For each statement below assume y=100 before the execution of the statement. What is the value of X after execution

```
X = --y * 4;
X= y = ++y;
```
8. Identify any erroneous or missing components in the following function
 - a) man()

```
{printf("this function seems to be okay");}
```
 - Main()

```
{this is a comment line;
Printf("Is it okay");}
```
9. Write down the purpose of a) fopen() and b) fgets()
10. what does "&" in C is used to represent ? Give example
11. Name the function used for comparing two strings. Give example.
12. Give the symbol for the equality operator. Give example
13. Find out the errors and correct ot.

```
Main()
int a, b, c
scanf("%d %d", a,b);
c = a+b;
printf(value of C is =")
```
14. Give the declaration for a structure called date with the following members.

```
Day(2 digits)
Month(2 digits)
Year(2 digits)
```
15. Write down the commands with relevant statement to read the first 5 records of the file trans.dat

PART – B (5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

1. A) Write a program to find out the square root of a given number
(or)
B) write a program to calculate the simple interest
2. A) Explain with proper syntax about any three control statements
(or)
B) Write a program to find whether the given equation is a quadratic or not
3. A) With a suitable example bring out the difference between call by value and call by reference
(or)
B) write functions to find the length of the given string, copy one string to another.
4. A) Write a program to display the contents of an array using pointer
(or)
B) write a program to access and print the information available in the structure.
5. A) Explain the file management in C
(or)
B) write a main function to create a file to store the names of 5 persons and print the stored names

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
007- C PROGRAMMING
PRACTICAL (60 Hours)

1. Write a program to calculate the mean and standard deviation for 10 numbers
2. Write a program to calculate the factorial of a given number
3. Write a program to add the given matrices
4. Write a program to arrange the given numbers in ascending order
5. Write a program to read a given matrix
6. Write a program to print a given matrix
7. Write a program to generate the fibonacci series
8. Write a program to find the given string is a palindrome or not
9. Write a program to find out the sum of all the elements of a given array
10. Write a program to add two numbers using function with arguments and return values.
11. Write a program to add two numbers using function with arguments and no return values
12. Write a program to assign information about 100 students to a structure and to print out the content of the structure. The members are number, age and sex
13. Write a program to exchange the contents of two variables using pointers as function arguments.
14. Write a program to find out the length of a given string
15. Write a program to create and display a file named as “employee” to store information such as name, age and salary of the five employees

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

008- CRISIS MANAGEMENT

Duration : 6 Months **Hours : 2 Hours per day**
Classes : Two days per week **Total Hours : 96**

COURSE CONTENT

UNIT-I

1. Introduction

- 1.1. Benefits
- 1.2. Basic Guidelines.
 - 1. Preservation of Dignity and Self Respect.
 - 2. Listening effectively.
 - 3. Respecting others as they are.
 - 4. Maintaining an independent point of view.
- 1.3. Handling Crisis.
- 1.4. A Four-step process for crisis management.

UNIT-II

- 1. Diagnosis.
- 2. Description of crisis
- 3. Diagnostic skills.
- 4. Clarify critical Issues, 5. Identify the stakeholders, 6. Determine the Source of Conflict.

UNIT-III

Planning

- 1. Nine strategic Management styles.
- 2. Overuse and Neglect. 3. Blocks to Constructive Crisis Management.
- 3. How to plan your strategy.

UNIT-IV

Preparation.

- 1. Using a Framework for Problem Solving. 2. Practice and More Practice.

UNIT-V

Implementation.

- 1. Execute your Plan.
- 2. Evaluating the outcome, 3. Follow up.

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
008 – CRISIS MANAGEMENT
MODEL QUESTION PAPER**

Time: 3 Hrs

Marks: 100

PART-A (10 x 4 = 40 Marks)

Answer any **TEN** questions, All questions carry equal marks.

1. What are the possible sources of crisis?
2. What are the two effective blends?
3. Why is follow-up action necessary?
4. When can your goal strike a favorable balance?
5. Mention any two stumbling blocks to constructive crisis management?
6. What are the two purposes in your evaluation strategies?
7. What is Remote behavior?
8. What are the tools available to handle disagreement?
9. Give any two crisis management styles?
10. Explain decision rule?
11. Write any two benefits that you would gain from improving your crisis management skills?
12. Give any two basic guide lines to resolve the conflict?
13. What are the positive aspects of crisis?
14. What are the principal causes of conflict at work-place?
15. What are the advantages in diagnosing political conflicts?

PART – B

(5 x 12 = 60 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

1. A. How will you prevent conflicts at work place?

Or

- B. Describe the four step process for handling conflict?

2. A. Describe the diagnostic skills to manage crisis effectively?

Or

- B. How will you identify the disagreement associated with methods?

3. A. Describe the nine strategic management styles?

Or

B. Describe the block to constructive crisis management?

4. A. What kind of framework can be used for problem solving? Explain.

Or

B. Write briefly about 'practice and more practice'.

5. A. Describe the note of emotion in crisis?

Or

B. Explain the two purposes in evaluation strategies.

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**DEPARTMENT OF TECHNICAL EDUCATION
GUINDY, CHENNAI – 25**

ADD-ON TECHNICAL COURSE

009-DESK TOP PUBLISHING

Duration	: 12 Months	Hours : 2 Hours per day
Classes	: Two days per week	Total Hours : 192

D.T.P. FOR PUBLICATIONS

- Introduction to printing
- Types of Printing
- Offset printing
- Working of offset printing
- Transparent printout, Negative & Positives for Plate were making
- Use of Desk Top Publishing in Publications
- Importance of D.T.P in publication
- Advantage of D.T.P in publication
- Mixing of graphics & Image in a single page production
- Laser printers-Use, Types, Advantage of lager printer in publication

PAGE LAYOUT

- Different page format/Layouts
- News paper page format
- Page orientations
- Columns & Gutters
- Printing in reduced sizes.

INTRODUCTIONS TO PAGE MAKER

- Page Maker Icon and help
- Tool Box Styles, Menus etc.
- Different screen Views
- Importing text/Picture
- Auto Flow, Columns, Master Pages and Stories
- Story Editor
- Menu Commands and short-cut commands
- Spell check, Find & Replace, Import Export etc.
- Fonts, Points Sizes, Spacing etc.
- Installing Printers, Scaling(Percentages)
- Printer setup

USE OF D.T.P IN

- Advertisements,
- Books & Managements
- News paper
- Table Editor

PRESENTATION GRAPHICS: MS POWER POINT

- Features and various versions
- Creating presentation using Slide master and templets in various colour scheme
- Working with different views and menus of power point
- Working with slides-Make new slide, move copy, delete, duplicate, lay outing of slide, zoom in or out of a slide.
- Editing and formatting text : Alignment editing, inserting , deleting , selecting , formatting of text find and replace text .
- Bullets, footer, paragraph formatting , spell checking.
- Printing presentation-print slides, notes, handouts and outlines
- Inserting Objects-Drawing and inserting Objects using cliparts, pictures and charts.
- Slide sorter, slide transition effects and other animation effects
- Presenting the show-making stand alone presentation, Pack and go wizards.

Reference Books:

1. Deke Mcclelland & Martin s. Mathews – TATA MC GRAW – HILL.

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**DEPARTMENT OF TECHNICAL EDUCATION
GUINDY, CHENNAI – 25**

**ADD-ON TECHNICAL COURSE
009-DTP
MODEL QUESTION PAPER**

Exam Duration : 2 Hours.

Maximum Marks: 50

**PART – A.
20marks**

10 X 2 =

Answer any Ten Questions. All questions carry equal Marks

1. What are the types of printing?
2. How do you work with offset printing?
3. Write advantage of DTP in publications?
4. Define page orientations?
5. How can you separate the columns? Explain.
6. Explain the different page format?
7. What are the menus used in page maker?
8. Define story editor?
9. Define Master Page?
10. How to Re-designing a catalogue ?
11. How to develop the vertical visiting cards?
12. What are the procedures followed while developing a new paper?
13. How to work slides
14. Define editing and formatting a text?
15. What are the features available in power point?

PART – B.

5x6 = 30 marks

Answer any one from each unit. All questions carry equal marks

- I 1. Describe Laser Printer in briefly?
 2. How do mix of graphics in a single page production in detail?
- II. 1. Describe briefly in new paper page format?
 2. How to take the print in reduced size briefly?
- III. 1. How can you change the font, points, sizes and spacing? Describe in briefly
 2. How to install printers?
- IV. 1. Describe table editor?
 2. Describe the management?
- V. 1. Describe pack and go wizards?
 2. Describe Bullets, footer, Paragraph, formatting and spell check.

009-DESK TOP PUBLISHING

Practical (Exercises)

PAGE MAKER:

1. Setting the inches in the Document Setup
 - ❖ Page Size should be in CUSTOM
 - ❖ Dimensions must be 8.5 x 11 inches
 - ❖ Margins in top 0.75, bottom 0.75, inside 1, outside 0.75 inches.
 - ❖ Should select Double-Sided, Facing Pages & Restart Page Numbering
2. Formatting Text Should consists of Bold, Italics, Underlined and Aligning and also apply the bullets and numbering to the text (Inviting a Chief Guest).
3. News letter and Advertisement should be Specified news and Specified commodity's price and quality.
4. Create a Visiting Card of V soft computer education with address, e-mail and phone number.
5. Setting a Table of Contents with the help of all the exercises in the DTP with page numbers.
6. Create the master pages by applying, removing and editing the master pages.

COREL DRAW:

1. Making the text rolling up, 3D-effects and also fitting text to path.
2. Create a greeting card with the help of artistic media.
3. Create a layer and then import an image from the bitmap file.
4. Apply 3D-effect, cropping, Art strokes and Power clip for a bitmapped image.
5. Extrude an object with vector extrusions, drop shadow and also apply uniform transparency.
6. Heal the image at the spot it is imported.

PHOTOSHOP:

1. Crop an image and also rotate the cropped area of the image.
2. Change a well colored image into grayscale or black and white color.
3. Push, pull, rotate, reflect, pluck and bloat the image to make it liquefy with the filter menu.
4. Apply the lighting effects to the image in the particular area.
5. Change the image into the glass effect and also diffuse the image which is imported.

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DEPARTMENT OF TECHNICAL EDUCATION
GUINDY, CHENNAI – 25
ADD-ON TECHNICAL COURSE
010- DOMESTIC WIRING

Duration : 6 Months **Hours : 2 Hours per day**
Classes : Two days per week **Total Hours : 96**

THEORY (30 Hours)

Unit I : Safety **Hours: 5**

Introduction of Safety in wiring: Gloves - Insulation tools — Purpose of Earthing - First aid

Unit II : Tools **Hours: 7**

Introduction to hand tools : Screw driver, tester, hammer, Fokker, cutter, Cutting pliers, nose pliers, sleeve cutter. Knives ,Soldering Iron - Introduction to power tools: Multi meter, test lamp, voltmeter, ammeter

Unit III: Cables & Wires **Hours: 5**

Cables: 2 Core & 3 Core - Types of Standard Wires Single strand wire, multi strand wire, Sizes of Standard wires SWG : 1/18, 1/20,3/20,7/20, Color Codes

Unit IV : Installation **Hours: 5**

PVC pipes – Panel Board: Main Switch, Energy meter, MCB , DB, Switches: Push type- Piano type Starter type switches: - MCB switch - Sockets: 5A and 15A sockets , Metal Gland Socket

Unit 5: Circuits **Hours: 8**

Circuit Diagram using BIS Symbols: Planning – Circuits – Devices- purpose - safety methods - Fault tracing - Diagnosing

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010-DOMESTIC WIRING

MODEL QUESTION PAPER

Time: 2 Hrs

Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions, All questions carry equal marks.

1. What is the purpose to use gloves during wiring?
2. Write any two methods for first aid
3. What is the need for Earthling?
4. Difference between Voltmeter and Ammeter?
5. Write any two application of multi meter?
6. What are the components used for soldering?
7. What is meant by single strand wire?
8. What are the different types of cables?
9. What is meant by color codes?
10. Mention the types of switches?
11. Write any two applications of PVC pipes?
12. Define metal gland socket?
13. What is meant by BIS?
14. Write any two safety measures?
15. How we can trace faults?

PART – B

(5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

1. A. What are the safety measures for wiring?
(Or)
B. Give short note on Insulation tools?
2. A. Explain: i)Fokker (ii) Hammer (iii) Cutting Player
(Or)
B. Draw the equivalent diagram for multi meter and explain it?
3. A. Differentiate 2 core and 3 core cables?
(Or)
B. Explain (I) Single strand wire
(ii) Double strand wire
4. A. Write a short note on Energy Meter?
(Or)
B. Define Socket and explain their types?
5. A. Explain Safety methods in circuits?
(Or)
B. Give short notes on Diagnosing?

010-DOMESTIC WIRING PRACTICAL (66 Hours)

List of Experiments

1. Draw the layout of the Wiring circuit
2. Wire a Fluorescent Lamp circuit to be controlled by a switch and provide 3 pin wall socket in the switch board
3. Perform Staircase wiring
4. Perform Dim and bright connections
5. Perform the Tracing of Tube light and draw the circuits using BIS Symbol
6. Perform the Tracing of Electric Fan and draw the circuits using BIS Symbol
7. Perform the Tracing of Wet grinder and draw the circuits using BIS Symbol
8. Perform the Tracing of Electric Water Heater and draw the circuits using BIS Symbol
9. Perform the Tracing of Electric Iron Box and draw the circuits using BIS Symbol
10. Perform the Tracing of Electric Fan and draw the circuits using BIS Symbol
11. Perform the Tracing of Mixie and draw the circuits using BIS Symbol
12. Perform the Tracing of Single phase Bore well pump motor and draw the circuits using BIS Symbol
13. Perform the Tracing of Voltage stabilizer and draw the circuits using BIS Symbol
14. Perform the Tracing of and draw the circuits using BIS Symbol
15. Perform the Tracing of Air Cooler Electric Bell and draw the circuits using BIS Symbol
16. Perform the Tracing of Three phase motor and draw the circuits using BIS Symbol
- 17.. Perform the Tracing of Direct-on-line starter and draw the circuits using BIS Symbol
- 18.. Perform the Tracing of Eliminator – power supply and draw the circuits using BIS Symbol
19. Fault identification in the given circuit and drawing the modified circuit
20. Rectifying the fault circuit.

**DEPARTMENT OF TECHNICAL EDUCATION
GUINDY, CHENNAI-25
ADD-ON TECHNICAL COURSE
011- E- COMMERCE**

Duration	: 6 Months	Hours : 2 Hours per day
Classes	: Two days per week	Total Hours : 96

1. INTRODUCTION

Networks and Commercial Transactions - Internet and Other Novelties - Electronic Transactions Today - Commercial Transactions - Establishing Trust - Internet Environment - Internet Advantage - World Wide Web.

2. SECURITY TECHNOLOGIES

Why Internet Is Unsecured - Internet Security Holes - Cryptography : Objective - Codes and Ciphers - Breaking Encryption Schemes - Data Encryption Standard - Trusted Key Distribution and Verification - Cryptographic Applications - Encryption - Digital Signature - No repudiation and Message Integrity.

3. ELECTRONIC PAYMENT METHODS

Traditional Transactions : Updating - Offline and Online Transactions - Secure Web Servers - Required Facilities - Digital Currencies and Payment Systems - Protocols for the Public Transport - Security Protocols - SET - Credit Card Business Basics.

4. ELECTRONIC COMMERCE PROVIDERS

Online Commerce Options - Functions and Features - Payment Systems : Electronic, Digital and Virtual Internet Payment System - Account Setup and Costs - Virtual Transaction Process - InfoHaus - Security Considerations – Cyber Cash: Model - Security - Customer Protection - Client Application - Selling through Cyber Cash.

5. ONLINE COMMERCE ENVIRONMENTS

Servers and Commercial Environments - Payment Methods - Server Market Orientation - Netscape Commerce Server - Microsoft Internet Servers - Digital Currencies - DigiCash - Using Ecash - Ecash Client Software and Implementation - Smart Cards - The Chip - Electronic Data Interchange - Internet Strategies, Techniques and Tools.

Text Books

1. Pete Loshin, "Electronic Commerce", 4th Edition, Firewall media, An imprint of laxmi publications Pvt. Ltd., New Delhi, 2004.

References:

1. Jeffrey F.Rayport and Bernard J. Jaworski, "Introduction to E-Commerce", 2nd Edition, Tata Mc-Graw Hill Pvt., Ltd., 2003.

2. Greenstein, "Electronic Commerce", Tata Mc-Graw Hill Pvt., Ltd., 2000.

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**DEPARTMENT OF TECHNICAL EDUCATION
GUINDY, CHENNAI-25
ADD-ON TECHNICAL COURSE**

**011-E-COMMECE
Model Questions**

Time: 3 Hours

Marks: 100

**PART – A
(Answer any TEN questions)**

(4 X 10 = 40 marks)

1. Define E- Commerce?
2. Write an Internet applications
3. What is WWW?
4. Define cryptography?
5. Define encryption?
6. How can you verify the trusted Key?
7. Define EFT and its broad categories
8. What are the types of Electronic tokens?
9. How should buyers pay online?
10. What are the types of electronic payment systems?
11. Write the properties of electronic cash?
12. List out the types of on-line?
13. How do you deliver a product to customer?
14. What is E-Cash?
15. Write the disadvantages of Credit Cards?

**PART – B
(Answer ALL questions)**

(12 X 5 = 60 marks)

16. How can establish the Internet?

(OR)

Describe about an Internet need products, and its advantages?

17. Explain briefly cryptographic application?

(OR)

Describe briefly in data encryption?

18. Write about the advantages of on-line marketing?

(OR)

Discuss about the usage of Digital Currency?

19. Discuss about the security consideration?

(OR)

Discuss about the client application?

20. Discuss about the smart cards briefly.

(OR)

How can you implement the electronic data interchange (EDI)?

**DEPARTMENT OF TECHNICAL EDUCATION
GUINDY, CHENNAI – 25
ADD-ON TECHNICAL COURSE**

012- ENVIRONMENT AND POLLUTION

Duration	: 6 Months	Hours : 2 Hours per day
Classes	: Two days per week	Total Hours : 96

UNIT: I

Environmental resources (energy, air, water, soil, minerals, plants, animals), carrying capacity, effects of exploitation.

UNIT: II

2.1: IMPACT ON ENVIRONMENT

Hazardous industrial and agricultural products and safety and health risks connected with their use.

2.2: EFFECTS OF MODERN AGRICULTURE ON ENVIRONMENT

use of high - yielding varieties and deprivation of genetic resources, canal irrigation and water logging, use of fertilizers and pesticides and its effects on environment, the dangers in manufacturing, storing, transporting, disposing of insecticides.

UNIT: III

Environment pollution of air, water, soil and its effects.

UNIT: IV

Environment pollution control of air, water, soil and its effects.

UNIT: V

Environmental action, environmental protection and conversion of resources. Pollution control, regulations.

REFERENCES

1. Environmental engineering and pollution control
by Duggal
2. Water supply and sanitary engineering by Rangawala
3. Environmental engineering by Gurcharansingh

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**012- ENVIRONMENT AND POLLUTION
MODEL QUESTION PAPER**

Time: 3 Hrs

Marks: 100

PART-A (10 x 4 = 40 Marks)

Answer any **TEN** questions, All questions carry equal marks.

1. Name the resources available?
2. Name the various chemical properties of water.
3. Which gases are forming the air?
4. What is the Hardness from industrial products?
5. What are causes of industrial hazardous?
6. Short notes on the effects of fertilizers pesticide on environment.
7. What are the effects of water pollution?
8. Write Short notes on Acid rain.
9. What are the impacts of pollution on land due to non-biodegradable waste materials?
10. What are the measures to be taken to prevent water pollution?
11. What are the air pollution control equipments?
12. Short notes on other waste water treatment of industries.
13. Write the principles which are to be observed in the conservation of water resources.
14. Write short notes on Green house effect
15. Give the legislation of environment.

PART – B

(5 x 12 = 60 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

16. (a) Explain briefly the various environmental resources available on the earth.
OR
(b) Write short notes on the following
 - i) Carrying capacity
 - ii) Effects of exploitation
17. (a) Explain the treatment process of a typical leather industry effluent with the help of Flow chart.
OR
(b) Explain the effects on environment by using fertilizers and pesticides
18. (a) Describe the harmful effects of air pollution on human beings and plants
OR

(b) Explain the main sources of soil pollution.

19. (a) Mention the most common types of external separators and explain them briefly

OR

(b) Explain the preservative measures of water pollution

20. (a) Give the need and methods of rain water harvesting

OR

(b) Describe the methods of solid waste disposal

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
013- FABRIC DYEING AND PRINTING

Duration : 12 Months **Hours : 2 Hours per day**
Classes : Two days per week **Total Hours : 192**

(Theory 60 Hours)

DETAILED SYLLABUS

UNIT-I : Introduction **12 Hrs**

Textile fibre – definition -Properties-Classification – sequence of processes in fibre to yarn manufacture-sequence of processes in yarn to fabric manufacture (Weaving and Knitting), count system – (Tex,Denier & English Count)-Brief idea about acids,alkali,salts,oxidizing and reducing agents –pH & its importance in textile processing-Basic steps of preparation for cotton - singeing,desizing, scouring, bleaching and mercerizing- Heat setting – Mechanism – Heat setting conditions for various fibers.

UNIT –II : Dyeing of cellulosic fibres **12 Hrs**

Introduction to Dyeing chromophore, auxochrome-Theory of Colour – Definitions- Affinity, Substantivity, Exhaustion, Expression, Percentage shade - Effect of M: L ratio, salt, temp & time of dyeing. Classification of dyes and pigments

Direct Dyes- Properties-Application of direct dyes on cotton- after treatments and their importance – limitations-Azoic dyes – Properties of Naphthols & Fast bases – Application procedure of any one Naphthol & Base using Exhaust method. Reactive dyes – Classification – Properties – Mechanism of dyeing-. Application methods – Exhaust dyeing, sodium silicate pad –batch method-Continuous methods. Vat dyes – Classification- Properties-- Application methods like Leuco vat.

UNIT III : Dyeing of synthetics and dyeing machines **12 Hrs**

Disperse dyes – Properties, Mechanism of dyeing –HTHP dyeing- Thermosol dyeing, Dyeing of CD - PET with Basic dyes – Dyeing of Nylon with acid dye / metal complex dyes, disperse dyes-Dyeing of acrylic fibres with basic dyes

Dyeing Machines-Fibre Dyeing – Rotary & Package dyeing machines, Yarn Dyeing - Conventional dyeing using tanks, Cabinet & Package dyeing machines–Woven Fabric dyeing - Jiggers, Beam, Thermosol dyeing range. Knitted Fabric dyeing - Winch, Soft flow-continuous dyeing - Padding mangle– Garment dyeing machines – dyeing defects and remedies.

UNIT IV : Printing**12 Hrs**

Definition-comparison of dyeing and printing ,style and methods with example , basics like repeat , squeeze ,coverage , consumption-Idea ingredients of printing paste and their role , thickeners , classification brief study of Sodium Alginate , CMC , Guar Gum , kerosene / MTO Emulsion . Synthetic thickeners. Direct style of printing – pigments, reactive , vat printing on cotton , disperse printing on polyester ,acid / metal complex dyes printing on silk , nylon study on polymerizer loop steamer ,washing machines-Discharge printing –vat discharge on reactive, discharge printing on polyester, resist printing – acid resist on reactive, batik, few garment prints-tie and dye style –study of printing machines – rotary , flat bed , table garment printing , sublimation ,transfer printing ,inkjet printing , printing defects and remedies.

UNIT-V : Finishing process**12 Hrs**

Classification of finishes-Advantages of finishing – finishing of cotton fabric with Stiffeners (Starch, PVA, Polyvinyl Acetate) and Softeners (Anionic, Cationic and Non-Ionic) - Anticrease finish -Sanforizing (Pre-Shrinkage) - use of silicon in finishing-Water repellent & flame retardancy finishes- working of stenter machine - working of ETP.

Water analysis- fastness tests (washing, rubbing, and light) - Shrinkage and GSM test-print durability test.

References:

Author	Title	Publisher	Year
G.Nalankilli & A.Edwinsunder	Chemical Preparatory Processes For Textiles.	NCUTE Publication	2004
John shore	Cellulosic dyeing	SDC Publications, UK	
Shenai V.A	Technology of Dyeing Technology of Textile Processing, Vol. I	Sevak Publications, 306, Sri Hanuman Industrial Estate, GC Ambedkar Road, Wadala, Bombay 400 031	1980
Prayag.R.S.	Tech.of Tex.Printing	Mrs.Prayag 127 Belgium Rd, Dharwad	1986
S.Udhayamarthandan	Technology of Textile Printing	SSMITT & PC, Students Co-operative stores, Komarapalayam	2007
Dr. G.Nalankilli and G.S.Jeyapragasham	Textile Finishing	SSMITT Students Co-operative Stores, Komarapalayam	

**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

013- FABRIC DYEING & PRINTING

MODEL QUESTION PAPER

Exam Duration : 2 Hours.

Maximum Marks: 50

PART – A

10 X 2 = 20marks

Answer any Ten Questions. All questions carry equal Marks

1. Define Textile Fibre
2. Name any four synthetic fibres
3. What do you mean by pH.?
4. What are primary and secondary colours?
5. Name any four water soluble dyes.
6. Give the properties of Vat dyes.
7. Write the properties of fabric dyes.
8. What is CD-PET?
9. What do you mean by continuous dyeing.?
10. What are the different styles of Printing?
11. What is an emulsion thickener?
12. What do you mean by the term 'sublimation'?
13. Define sanforizing.
14. Define hard water.
15. What is G.S.M.

PART – B

(5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (a) or sub-division (b) of each question.

1. a. Mention the fabric steps of preparation for cotton. Explain each one of them.
(Or)
b. Explain the mechanism of heat setting. Give heat setting conditions for various fiber
2. a. Explain the application procedure of any one Napthol and Base using Exhaust method
(Or)
b. How will you dye cotton using Vat dyes using Leuco Vat method.

3. a. Explain the construction and working of soft flow dyeing machine.
(Or)
b. How are hanks dyed in a cabinet dyeing machines.
4. a. Explain the Vat discharge printing on reactive back ground.
(Or)
b. Write short notes on :
i) Tie and Dye style
ii) Transfer Printing
iii) Printing defects and remedies.
5. a. How is water repellency is imparted on cotton fabrics?
(Or)
b. How is light fastness of dyed fabrics tested?

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
013 – FABRIC DYING AND PRINTING
PRACTICAL (132 Hours)

FABRIC DYEING – PRACTICAL

Total= 66 Hours

List of Experiments:

1. Identification of fibres by burning & solvent tests
2. Desizing and determination of starch content in a fabric using Enzyme desizing method
3. Scouring of desized cotton fabrics & Bleaching of scoured fabric with hydrogen peroxide.
4. Dyeing of cotton fabric with direct dyes followed by suitable after treatment
5. Dyeing of cotton fabric with azoic dyes
6. Dyeing of cotton fabric with cold brand reactive dyes
7. Dyeing of cotton hank with hot brand reactive dyes
8. Dyeing of cotton hank with vinyl sulphone reactive dyes
9. Dyeing of cotton fabric with vat dyes with after treatment
10. Dyeing of cotton fabric sulphur colors with after treatment.
11. Dyeing of wool with acid dyes
12. Dyeing of Silk with acid dyes.
13. Dyeing of nylon with acid dyes
14. Dyeing of polyester with disperse dyes by HTHP method
15. Dyeing of acrylic with cationic dyes
16. Dyeing of PET/ cotton blend with disperse/reactive dyes by two bath process
17. Estimation of wash fastness,
18. Estimation of rubbing fastness
19. Estimation of light fastness
20. Estimation of shrinkage for the given cotton fabric.

FABRIC PRINTING - PRACTICAL

Total= 66 Hours

List of Experiments:

1. Direct style of printing using pigments on cotton.
2. Direct style of printing on polyester using disperse dyes (Print-dry- HTHP Steaming /Thermosol method)
3. Direct style of printing on cotton with hot brand reactive dyes by steaming method.
4. Direct style of printing on cotton with vinyl sulphone reactive dyes by sodium silicate by cold pad batch / hot silicate method.
5. Tie & dye – resist style of Coloration using reactive dyes. (white effect)
6. Tie & dye – resist style of Coloration using reactive dyes. (multi color effect)
7. White discharge printing on reactive dyed / padded cotton fabric.
8. Vat color discharge printing on reactive dyed / padded cotton fabric
9. Pigment discharge printing on reactive dyed / padded cotton fabric.
10. Printing of knitted fabric with khadi pastes
11. Printing of knitted fabric metallic powder pastes
12. Printing of knitted fabric plastissols inks
13. Printing of nylon with Acid dyes.
14. White discharge on polyester fabric
15. White resist on polyester fabric
16. Printing of silk fabric with acid dyes .

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
014- FASHION DESIGNING**

Duration : 6 Months
Classes : Two days per week

Hours : 2 Hours per day
Total Hours : 96

THEORY (30 Hours)

DETAILED SYLLABUS

Unit I. Introduction to Art 6 Hrs

Study of Tools & equipments used for drawing viz– pencil, brushes, crayons.

Human figure Drawing:- Eight head theory - Study of Body measurements- Brief study of method of drawing human parts - Figure Proportions of Male, Female and Child .

Unit II. Introduction to Colours & Painting Techniques 6 Hrs

Color theory – Pigment Color Theory- Study of Pigment theory Primary - Secondary - Tertiary colors – Study of 12 color wheel - Study of Warm and Cool colors - Tints – Shades. Study of colour scheme- Study of Water colour and Poster colour Painting.

Unit III. Principles and Elements of Design 6 Hrs

Introduction to Elements of Design – Introduction to Principles of Design – Introducing Unity on Dress – Emphasis on Dress – Proportion on Dress – Harmony on Dress – Rhythm on Dress – Illusion created by Lines, Shapes & Textures.

Unit IV. Design aspects and development 6 Hrs

Study of Design pattern in Fabrics viz Geometrical – Floral- Animate- Abstract.

Design presentation in fabrics: Spot design – All over design –Half drop design – Striped- Checked- Border designs.

Brief Study of structural & decorative designs on dress.

Study of design development technique- Study on Computerised design development – tools – applications.

Unit V. Fashion Industry & Wardrobe Planning 6 Hrs

Study of Fashion industry - Work of Fashion Director - Work of Fashion Designer - Brief study of American, French, Italian and Indian designers - Fashion capitals- Fashion shows- Fashion Magazines- Fashion videos- Study of Fashion forecasting. Study of Wardrobe planning.

References:

Author	Title	Publisher	Edition	year
Frank Alvah	The Psychology of dress	Double day Page & Co.		
Grace Margarit Morton	The arts of costume & Personal appearance	John Wiley & Sons London.		
Byrta Carson	How you look and dress	McGraw - Hill Book co.London.		
Ruth tone and Tarplay	Fabrics and dress	Houghton Mifflin London		
Designers guide to colour	Kuyoshi Shibukawa Yami Takahasi	Chronicle Books, Sanfrancisco		
Painting in water colour	Gwynin Kate	Chartwell Books Inc.		
Goldstein and Goldstein	Art in every day life	-do-		
Harison feather	Elementry Costume design	John Wiley and Sons Stone Dorothy		
H.F.Kepworth	Dress Designing	The English Univ.PressLtd., London		
Margaret story	Individuality and Cloths	Funle & Wsanalls Lippion cott.		
Degrmo Winslow	Essential of Design	Macillion Co.New York.		
K.Sukumar G S Sivakumar	Fashion Design	SSMITT Students' co-op stores, Komarapalayam		
Thames and Hudson	Men's wardrobe	London		
Sumathi.G.J	Elements of Design & Apparel Design	New Age International, Delhi		2002
Charlotte Seeling	Fashion The Century Of The Designer			
Alton cook & Robert Fleury	Type & Color	RockPort Publishers		1989
Dr.Alice Mackrell	Art & Fashion	Batsford Publication		2005
Manmeet Sodhia	Design Studies	Kalyani Publishers		

**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
014 – FASHION DESIGNING**

MODEL QUESTION PAPER

Time: 2 Hrs

MAX. Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions: All Question carry Equal Marks

1. List the tools & equipments used for drawing.
2. What do you mean by figure proportions?
3. Define : Eight Head Theory
4. Define : Warm and Cool colours.
5. Define the term Tint and Shade.
6. What is meant by colour scheme ?
7. Write notes on Elements of Design.
8. Define Harmony on Dress.
9. What are the illusions created by lines.
10. Draw the sketch for half drop design.
11. What do you mean by Structural design?
12. What are the tools used in computerized design development ?
13. Mention the work of fashion director.
14. Write short notes on fashion forecasting.
15. What your mean by wardrobe planning?

PART – B (5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (a) or sub-division (b) of each question.

- 1) a. Explain in detail about Eight Head Theory.
(OR)
b. How will you analyse proportions for Male & Female figure? Explain.
- 2) a. Explain in detail the Pigment theory of colours.
(OR)
b. Explain in detail about Poster colour painting with suitable example
- 3) a. Explain in detail about principles of designs.

(OR)

b. How will you create dress design with the help of textures for various occasion.

4) a. Write notes on 1. Spot Design. 2. Border Design.

(OR)

b. Explain in detail about computerized design development

5) a. Explain in detail the importance of fashion magazines and fashion videos.

(OR)

b. Explain the work of any two Indian Fashion Designers.

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

**014 – FASHION DESIGNING
PRACTICAL (66 Hours)**

List of experiments:

1. Drawing of Plane and solid objects without light effect.
2. Drawing of Head, Hand and Leg of a human figure.
3. Drawing different sizes of Human figure.
4. Drawing Primary and Secondary Colours chart of Pigment theory.
5. Drawing Colour charts of Related Colour Scheme.
6. Drawing Colour charts of Contrasting Colour Scheme.
7. Sketching fashion accessories out of every day objects.
8. Drawing a summer wear for children with suitable colours.
9. Drawing spring wear for children with suitable colours.
10. Drawing a summer wear for Ladies with suitable colours.
11. Drawing spring wear for men with suitable colours.
12. Creating an Illusion on Dress using Lines.
13. Creating an Illusion on Dress using Colors.
14. Developing a fashionable garment from Basic patterns.
15. Developing a kids decorative garment by using fashion CAD
16. Developing different neck decorative designs by using fashion CAD.
17. Developing different sleeve styles suitable for men's garment by using fashion CAD
18. Developing different sleeve styles suitable for ladies garment by using fashion CAD
19. Developing different fashionable accessories by using fashion CAD
20. Developing a ladies hand bags with decoration by using fashion CAD

Equipments / Machines / Instruments required:

Drawing tools
Painting tools
Computers & Fashion designing software

Materials required :

Chart paper- A4/ A3

DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
015-FINANCIAL MANAGEMENT

Duration : 6 Months **Hours : 2 Hours per day**
Classes : Two days per week **Total Hours : 96**

UNIT I

Nature, Scope and Objectives of Financial Management, evaluation of Financial Management - Finance Function - Financial Environment in India - Financial Planning, Forecasting and Analysis - Planning and Forecasting of short term and long term funds - Funds flow analysis - Cash Flow Analysis.

UNIT II

Financing Decision : Sources of funds - Relative merits and demerits, Capital Structure - Theories of capital structure - Factors affecting capital structure - Financing decision in practice - Leverage - Operating, Financial and combined leverage - Cost of capital - Costs of individual components of capital - Weighted Average cost of capital.

UNIT III

Investment Decision : Nature and Significance of Investment Decision - Estimation of cash flows - Capital Budgeting Process - techniques of investment appraisal : Pay back period; Accounting Rate of Return, Time value of money - DCF Techniques - Net present value, Profitability Index and Internal Rate of Return - Investment Appraisal practices in Indian companies.

UNIT IV

Working Capital Decision: Meaning - Classification and significance of working capital - Financing of Working capital - Component of working capital, Cash, Short-term marketable securities - Accounts Receivables and Inventories - Management of A/P & ST Borrowings

UNIT V

Dividend Decision : Meaning and Significance - Theories of Dividend - Determinants of Dividend - Dividend Policy - Dividend policies in practice - Legal aspects of Dividends - Bonus shares - Stock splits.

REFERENCE BOOKS:

1. Van Horne, Financial Management and Policy, 12th ed. Prentice Hall of India
2. Van Horne & Wachowicz, Jr. Fundamentals of Financial Management, 11th ed. Prentice Hall of India
3. Prasanna Chandra, Financial Management : Theory and Practice
4. I.M. Pandey, Financial Management : Vikas Publishers
5. Richard A. Brealey, Principles of Corporate Finance
6. I.M. Pandey, Ramesh Bhatt, Cases in Financial Management
7. Hrishikes Bhattacharya, Working Capital Management : Prentice Hall of India
8. Foster, Financial Statement Analysis - Pearson Education Publishers.

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

015-FINANCIAL MANAGEMENT

Model Questions

Time: 3 Hours

Marks: 100

PART – A

(4 X 5 = 20 marks)

(Answer any FOUR questions)

1. State the objectives of Financial Management?
2. Write short notes on operating leverages?
3. Write short notes on payback period?
4. What are the basic problems of cash management?
5. Write short notes on Bonus Shares?

PART – B

(20 X 4 = 80 marks)

(Answer any FOUR questions)

6. From the Balance Sheets of A Ltd., make out:
 - A. a Statement of Changes in the Working Capital.
 - B. a Fund Flow Statement.

BALANCE SHEET

Liabilities	31 st March		Assets	31 st March	
	1995	1996		1995	1996
	Rs.	Rs.		Rs.	Rs.
Equity Share Capital	3,00,000	4,00,000	Goodwill	1,15,000	90,000
12% Redeemable Preference Shares	1,50,000	1,00,000	Land and Building	2,00,000	1,70,000
General Reserve	40,000	70,000	Plant	80,000	2,00,000
Profit & Loss a/c	30,000	48,000	Debtors	1,60,000	20,000
Proposed Dividends	42,000	50,000	Stock	77,000	1,09,000
Creditors	55,000	83,000	Bills Receivable	20,000	30,000
Bills Payable	20,000	16,000	Cash in hand	15,000	10,000
Provision for Taxation	40,000	50,000	Cash at bank	10,000	8,000
	6,77,000	8,17,000		6,77,000	8,17,000

Following is the additional information available:

- i. Depreciation of Rs.10,000 and Rs.20,000 have been charged on Plant and Land and Buildings respectively in 1996.
- ii. An interim dividend of Rs.20,000 has been paid in 1996.
- iii. Income Tax of Rs.35,000 has been paid in 1996.

7. A Ltd., has a share capital of Rs.1,00,000 divided into shares of Rs.10 each. It has major expansion programme requiring an Investment of another Rs.50,000. The management is considering the following alternatives for raising this amount:
- i. Issue of 5,000 Equity Shares of Rs.10 each.
 - ii. Issue of 5,000 , 12% Preference shares of Rs.10 each.
 - iii. Issue of 10% debentures of Rs.5,000.

The company's present earnings before interest and tax (EBIT) are Rs.40,000 p.a. You are required to calculate the effect of each of the above modes on financing of the earnings per share (EPS) presuming:

- a. EBIT continues to be the same even after expansion.
 - b. EBIT increases about Rs.10,000.
8. Calculate the net present value for a small sized project requiring an initial investment of Rs.20,000 and which provides a net cash in flow of Rs.6,000 each year for 6 years. Assume the cost of funds to be 8% p.a. and that there is no scrap value.
9. What is meant by working capital management? What are the determinants of working capital? Explain.
10. Explain the factors that influence the dividend policy.

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DEPARTMENT OF TECHNICAL EDUCATION
GUINDY, CHENNAI – 25
ADD-ON TECHNICAL COURSE
016-FRONT OFFICE MANAGEMENT

Duration	: 6 Months	Hours : 2 Hours per day
Classes	: Two days per week	Total Hours : 96

UNIT –I : COMMUNICATIONS AND HUMAN RELATIONS

Introduction – Basic concepts –Importance of communication – Departments and sections with which front office communications – Methods of communications – Barriers of communications – Telephone communication

Methods of recruiting Hotel personnel- Orientation of personnel- Responsibilities concerning training – Motivation – Performance assessment – Discipline – Termination of hotel personnel.

UNIT –II : HOTEL ORGANIZATION AND FRONT OFFICE STAFF

Introduction – importance –prerequisites of organization – purpose –characteristics –models of organization- organization chart – Management of Human resources of front office.
Front office – functions and importance of front office – sections in front office department- qualities of a good front office employee – job descriptions – the art of reception – rules of the house for the front office staff.

UNIT –III : TARIFF STRUCTURE AND GUEST HANDLING

Tariff –basis of charging tariff – tariff fixation – group rate – volume rate-rack rate-volume rate –executive business tariff rate – government rate –tour group whole sale rate- seasonal rate-week day/weekend rate- sample tariff card

Reservation – functions of reservation section – channels of reservation –types of reservation – reservation rules –registration process-bell desk- functions of bell desk- message handling – room key control - departure procedure- idle time analysis

UNIT – IV : GUEST ACCOUNTING AND BUDGETING

Basis of keeping accounts –ledger –guest ledger – office cash sheet – cash receipt- presentation and settlement of bills- night audit process- late check out

Kinds of budgets –forecasting room revenue – estimating expenses- making front office budget- accommodation statistics and yield management

UNIT – V : HOTEL AND GUEST SECURITY

Room break –ins security – bomb threat security – importance of security system – types of security – fire-main causes- basic types of fire – fire fighting training –safety and fire precaution , some disastrous hotel fires , guide to extinguishers likely to be used in hotels, handling emergency situations.

REFERENCE BOOKS

- 1.S.K Bhatnagar (2002) front office management (1st edition)frank bros &co publisher Ltd , New Delhi
2. Ismal.A (2001) front office operations and management (1st edition) Thomson Delmar Learning, Newyork
3. Bardi Hotel front office management(3rd edition) Wiley, Newyork

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**DEPARTMENT OF TECHNICAL EDUCATION
GUINDY, CHENNAI-25
ADD-ON TECHNICAL COURSE**

**016-FRONT OFFICE MANAGEMENT
Model Questions**

Time: 3 Hours

Marks: 100

**PART – A
(Answer any TEN questions)**

(4 X 10 = 40 marks)

1. What are the basic components of interpersonal communication process?
2. Explain the term orientation.
3. What are the do's and don'ts of telephonic communication?
4. What are the importance of organization?
5. Explain the term span of control.
6. Explain the term multisystem reception counter for large hotel.
7. Explain the term "check in hand and check out basis".
8. Explain the term "Guest Cycle".
9. Write a proforma of "Reservation form"?
10. Explain the term "Guest Ledger".
11. Explain the role of night auditor.
12. What are the benefits of field management?
13. What do you meant by Room Break – ins security?
14. What are the basic types of fire?
15. What are the types of fire extinguishers?

**PART – B
(Answer ALL questions)**

(12 X 5 = 60 marks)

16. What are the barriers to communication and how to overcoming barriers to communication?

(OR)

What are the methods of recruiting hotel personnel?

17. What the pre-requisites of good organizations?

(OR)

What are the qualities needed for a good front office employee?

18. What are the methods of tariff fixation?

(OR)

What are the functions of reservation section?

19. How to prepare office cash sheet?

(OR)

Explain the rules for making front office budget.

20. What are the importance of securities system?

(OR)

Discuss some popular system used for fire safety.

**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

**017- GARMENT QUALITY INSPECTION & EXPORT
MERCHANDISING**

Duration : 6 Months
Classes : Two days per week

Hours : 2 Hours per day
Total Hours: 96

THEORY (30 Hours)

DETAILED SYLLABUS

Unit I. Basic Textiles

6 Hrs

Fibre classification – Yarn numbering system – Yarn particulars like Count, Twist, Strength. Fabrics – Different types. Brief study of Scouring, Bleaching, Dyeing, Printing and Finishing.

Unit II. Quality Control

6 Hrs

Quality control – Definition – importance of quality – Raw material inspection – Fabric inspection – Four point system – Ten point system - Inspection of sewing thread, zippers – Buttons –snap fasteners. In process inspection – Spreading – Cutting – Sewing – Pressing & Finishing. Final inspection.

Unit III. Garment testing and Care labeling

6 Hrs

Study colour measuring instruments – Instrumental shade sorting – Seam strength Testing - Dimensional changes of fabric - Sewability of fabrics - Bow and Skewness in Woven and Knitted fabrics.
Study of care labeling – Different types of packing – Brief study of different types of packing materials.

Unit. IV. Market Research & Product Development

6 Hrs

Market Research – Definition- Objectives - Product Development – Designers.
Marketing - Definition- Objectives – Strategies- Apparel market system - Retail Marketing- International Marketing- Sales promotion program for Apparel marketing - Different media in Apparel Marketing.

Unit V. Merchandising

6 Hrs

Apparel merchandising- definition- Roll of merchandising division in an apparel firm - Visual Merchandising- definition- displays.
Merchandising plan- planning sales goals- planning components- direct order- merchant order- CMT order- vendor and sub contractor- requirement of a purchase order- types of buyer– Fashion forecasting.

REFERENCE BOOKS

Author	Title	Publisher	Edition	Year
Jayaprakasam. S Gopalakrishnan.R Kasinathan. V	Fibre Science	SSMITT Student's Coop. Stores, Komarapalayam	I	1997
Shenai. V.A	Technology of Textile Processing all series	Shevak Publication Bombay		1999
Marsh. J.T.	An Introduction to Textile Finishing	BT Publication, Mumbai		1979
Miller. W.C	Textile Printing	Society of Dyers		1994
Angappan. P Gopalakrishnan. R	Textile Testing	SSMITT Student's Coop. Stores, Komarapalayam		1997
Pradip V Mehta	An Introduction to Quality Control for the Apparel Industry	ASQC Quality Press, New York		
Pradip V Mehta	Managing Quality in Apparel Industry	New Age International publishers	1	1998
Philip Kotler	Marketing Management	Prentice Hall		
Ernest H Rich	Retail Merchandising	Merrill Publishing		1987
Manmeet Sodhia	Fashion Marketing & Merchandising	Kalyani Publishers	1	2003
Donnellecen John	Merchandise Buying and Management	Fairchild Publication Inc.	II	1996

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
017 - GARMENT QUALITY INSPECTION & EXPORT
MERCHANDISING**

MODEL QUESTION PAPER

Time: 2 Hrs

MAX. Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions: All Question carry Equal Marks

1. Give the classification of fibres.
2. Define : Count
3. What do you mean by Scouring ?
4. Define: Quality ?
5. List out the Fabric Inspection methods.
6. How will you inspect the Spreading process ?
7. Define : Seam Strength
8. Define : Bow
9. List out the packing materials used in garment Industry.
10. Define : Marketing
11. What do you mean by product development ?
12. What is retail Marketing ?
13. Define : CMT
14. What do you mean by vendor ?
15. What is fashion forecasting ?

PART – B (5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (a) or sub-division (b) of each question.

- 1) a. Explain the different types of fabrics used in garment industry.
(OR)
b. Write short notes on (i). Bleaching (ii) Dyeing
- 2) a. Explain the raw material Inspection
(OR)
b. Describe about final Inspection.
- 3) a. How will you test the Seam Strength
(OR)
b. Explain the Care Labelling System
- 4) a. Elaborate on Market Research.
(OR)
b. Describe about International Market
- 5) a. Explain the roll of Merchandiser in Apparel Firm
(OR)
b. Explain about Vendor and Sub contractor.

**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
017 - GARMENT QUALITY INSPECTION & EXPORT
MERCHANDISING**

PRACTICAL (66 Hours)

List of Experiments:

1. Determination of Yarn Count.
2. Determination of fabric Structure and Particulars- Plain & Matt
3. Determination of fabric Structure and Particulars- Twill & sateen
4. Determination of Fabric Tensile strength.
5. Determination of fabric Tearing strength.
6. Determination of Fabric bursting strength.
7. Determination of fabric Drape.
8. Determination of fabric pilling resistance.
9. Bleaching of Cotton fabric with Hydrogen peroxide.
10. Dyeing of Cellulosic fabric with Reactive dyes.
11. Dyeing of Polyester with Disperse dyes.
12. Determination of Wash fastness of the given dyed fabric.
13. Determination of rub fastness of the given dyed fabric.
14. Determination of light fastness of the given dyed fabric.
15. Determination of dimensional stability of the given fabric.
16. Determination of GSM of the given woven & knitted fabric.
17. Garment quality inspection process.
18. Determination of cost of the given garment
19. Practicing the Export Documentation process.
20. Practicing the Financial realization process.

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

018- GEOGRAPHICAL INFORMATION SYSTEM

Duration : 6 Months

Classes : Two days per week

Hours : 2 Hours per day

Total Hours : 96

UNIT 1

DGI 102 PRINCIPLES OF GEOGRAPHICAL INFORMATION SYSTEMS (GIS)- (3-0)

Basic Concepts about spatial information, Philosophy and definition of GIS, features, pictures, variables: points, lines, areas, position on the earth; basics of map.

Fundamentals of data storage, Information Organization and Data Structure Basic file Structures; Tabular Databases; Advantages of Databases. Types of Databases- hierarchial systems, network systems, relational systems and object-oriented database systems (OODS), data models –Entity Relationship model, Relational Model, Data Structures; Raster Structures, Vector Structures.

UNIT 2

GIS data requirement, sources and collection methods of data capture-scanning. Digitization and associated errors, conversion from other digital sources, attribute data input and management edge matatching, creating digital data-remote sensing; generating data from existing data; METADATA; Different kinds of geospatial data, Detecting and Evaluating Errors, Data quality Measurement and Assessment, digital output options.

Image storage formats Data retrieval, Data comopression, NSDI, GSDI; geographic information in decision making; human resources and education; Interactive data exploration, Vector & Raastera data guery, Geographic visualization;

UNIT 3

Rastear data structure, Local operations, Neighborhood operations, Zonal operations, Distance measure operations, Spatial auto correlations, DEM generation, spatial Modeling, combing data; terrain mapping finding and quantifying relationships; spatial interpolation;

UNIT 4

Vector data base, Topological Relationships; Creation of topology and Error Correction; Accuracy and precision; The Importance of Errors, Accuracy, and precision, types of error, sources of error, data quality, Spatial intearpolation, Overlay Operations and Buffering, Neighborhood functions Distant Measurement, Map Manipulation, Network analyses,

UNIT 5

GIS and Remote Sensing data Integration, Thematic Mapping, GIS and Integration of other types of data, Virtual GIS and SDSS, project design and management need assessment.

TEXT BOOKS

1. Kang-tsung chang 2002, Introduction to Geographic Information Systems TAata McGraw Hill, New Delhi.
2. C.P.Lo and Alberat K.W. Yeung 2005 “Concepts and Techniques of Geographic Information Systems” Preantice Hall of India , New Delhi.

REFERENCE BOOKS

1. Burrough, Peter A. and Rachael McDonnell, 1998, ‘Principles of Geographical Information System’ Oxford University Press, New York.
2. Maguire, D.J., Goodchild, M.F. and Rhind, D.M.Ed. 1991, ‘Geographical Information Systems; Principles and Applications’, Longman Group, U.K.
3. Sabins, F.F. Jr., ‘Remote Sensing- Principles and Interpretation’, W.H. Freeman & Co., 2002 Edition.
4. Reeves, Robert G., ‘Manual of Remote Sensing, Vol. AI, American Society of Photogrammetry and Remote Sensing, Falls Church, Virginia, USA
5. Lillesand, Thomas M. and Kiefer, Ralph, W., ‘Remote Sensing and Image Interpretation’, 4 Edition, John Wiley and Sons, New York, 2000
6. Rampal, K.K., Handbook of Aerial Photography and Interpretation, Concept Publishing Company, New Delhi, 1999

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018-GEOGRAPHICAL INFORMATION SYSTEM

MODEL QUESTION PAPER

Time: 3 Hrs

Marks: 100

PART-A (10 x 4 = 40 Marks)

Answer any **TEN** questions, All questions carry equal marks.

1. Give the definition of GIS
2. What are the Map features that are used in GIS?
3. What is Database?
4. Write the methods of data capturing.
5. What are the sources of GIS Data?
6. State the different kinds of geo-spatial data.
7. State the types GIS data.
8. What is meant by Raster data?
9. Define Latitude and Longitude?
10. Define Vector data?
11. Define co-ordinate system and state its types?
12. What is meant by overlay?
13. What is Remote Sensing?
14. State the application of Remote Sensing
15. Define thematic map?

PART – B

(5 x 12 = 60 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

1. (A) Explain the uses and features of GIS? When should be the specific feature used?
OR
(B) Explain briefly about all the types of Database?
2. (A) Explain briefly about geo reference including the finding of RMS error value?

OR

(B)What are types of file formats that available? How will you convert one file format to the other format?

3. (A) Define Raster data? Explain briefly about structure?

OR

(B) Explain the following terms with its working

(i) Zonal operation

(ii) Spatial modeling

(iii) Spatial interpolation

4. (A) Write about the creation of topology and error correction. Write the importance of error correction.

OR

(B)Explain the process of overlaying and buffering. Discuss about the Network analysis.

5. (A) Explain about GIS and Remote sensing.

OR

(B) Write a case study that uses GIS software.

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
019-HARDWARE SERVICING**

Duration : 12 Months
Classes : Two days per week

Hours : 2 Hours per day
Total Hours : 192

THEORY (72 Hours)

UNIT – I INSIDE THE PC

- 1.1 **Introduction:** Evolution of Computer – Block diagram of Pentium - Inside the Pentium – Parts - Mother board, chipset, expansion slots, memory, Power supply, drives and connectors
- 1.2 **Systems:** Desktop, Lap Top, Specification and features - Comparison table. Server system – IBM server families, Sun Server, Intel processor etc - Workstation.
- 1.3 **Mother Board:** Evolution – Different forms of mother boards - Riser Architectures. Intel, AMD and VIA motherboards.
- 1.4 **Chipsets:** Introduction – 945 chipset.
- 1.5 **Bus Standards:** Introduction – ISA Bus – PCI Bus – PCI Express, USB, High speed Bus, – Pin details and Architecture.
- 1.6 **Bios-setup:** Standard CMOS setup, Advanced BIOS setup, Power management, Advanced chipset features, PC Bios communication – upgrading BIOS, Flash, BIOS -setup.
- 1.7 **Processors:** Introduction – Pentium IV, Hyper threading, dual core technology , Core2Duo technology — AMD Series, Athlon 2000, Xeon processor. Comparison tables. Pentium Pin details, Itanium Processor - Pentium packaging styles.

UNIT II MEMORY AND DAUGHTER BOARDS

- 2.1 **Memory:** Introduction - Main memory – Evolution - DRAM – EDO RAM - SDRAM – DDR RAM versions – IT RAM – Direct RDRAM – Memory Chips (SIMM, DIMM, RIMM)- Extended – Expanded – Cache - Virtual Memory- Causes of false memory errors.
- 2.2 **Graphic Cards:** Introduction - Definition and Layout of Components in Graphics card – Graphics Processor – Video memory – RAMDAC – Driver Software – 3D – Video capture card installation.
- 2.3 **Sound Cards:** Introduction - Definition of Various Components – Connectivity – Standards – A3D – EAX – MIDI – General MIDI – PCI Audio – USB Sound – MP3 – SDMI.

- 2.4 **Displays:** Introduction – CRT – Anatomy – Resolution – refresh rate – interlacing – Digital CRT's – Panel Displays – Introduction – LCD Principles – Plasma Displays – TFT displays.
- 2.5 **Display adapter:** Introduction - VGA and SVGA cards, flickering, Demagnetizing and precautions .
- 2.6 **Keyboard, and Mouse and barcode scanner:** Introduction – Keyboard , wireless Keyboard – Signals – operation - troubleshooting - Mouse types, connectors , Serial mouse, PS/2 mouse and Optical mouse operation – Signals – Installation – barcode scanner - operation

UNIT III DISK DRIVES

- 3.1 **Hard Disk:** Introduction – Construction – Working Principle - Specification of IDE, EIDE, Ultra ATA, Serial ATA, SCSI, Disk Array controller, solid state drive. HDD Installation – Partition – Formatting. Troubleshooting hard disk drives; problem diagnosis, typical problems and troubleshooting; Hard disk drive, components, Head Actuator mechanism Head positioning of a voice coil base system.
- 3.2 **CD/DVD ROM:** Introduction – Basics, Working principle – various formats (Books) – CD-R, CD-RW, DVD: Introduction – Formats – Technology – DVD-ROM, DVD Video, DVD Audio – Recordable formats – DVD-R, DVD-RW, DVD-RAM
- 3.3 **Special type of drives:** Zip drive, Memory stick, USB-flash drive, iPod Dock version and installation.
- 3.4 **I/O Ports:** Serial – Parallel – USB – Game Port – Blue tooth interface, IR connector, Signal specification problems with interfaces.

UNIT IV I/O DEVICES AND POWER SUPPLY

- 4.1 **Printers:** Introduction – Types of printers – Dot Matrix – Inkjet – Laser - Operation – Construction – Features – Troubleshooting Dot matrix, Inkjet and laser printer problems.
- 4.2 **Modem and Router:** Modem - Introduction – Operation – Types – Installation – Router - introduction.
- 4.3 **Scanners:** Introduction – operation – Scan Resolution - Color Scanners – Scan modes – File formats - Simple problems and troubleshooting.
- 4.4 **Digital Camera:** Introduction – Operation – Features.

- 4.5 **Web Camera, Biometric devices:** Thump scanner, Iris scanner, speech synthesizer - operation and installation - Trouble shooting.
- 4.6 **SMPS:** Principles of Operation – Block Diagram – AT & ATX Power Supply, connector specifications and protection.

UNIT V TROUBLE SHOOTING PC

- 5.1 **Room Preparation and Power supply:** Location – Pollution – Air-conditioning – Power Supply – Voltage Regulators – Servo Stabilizers – UPS, Surge suppressors and spike isolators.
- 5.2 **Installation practice:** Routine checks - Preventive maintenance - problem causes, peripheral and general precautions.
- 5.3 **Faults elimination process:** Dead system spurious problem - security failures - heartbeats and multiple faults - Systematic trouble shooting - Symptoms observation – analysis - Fault diagnosis and fault rectification.
- 5.4 **POST:** Definition – IPL hardware – POST Test sequence – beep codes and error messages.
- 5.5 **Diagnostic Software and Viruses:** Computer Viruses – Precautions – Anti-virus Software – identify the signature of viruses – Firewalls and latest diagnostic softwares.

REFERENCE BOOKS

S No	TITLE	AUTHOR	PUBLISHER
1.	IBM PC and CLONES	B.Govindrajalu	Tata McGrawhill Publishers
2.	Computer Installation and Servicing	D.Balasubramanian	Tata McGraw Hill , 2005
3.	Computer Installation and Troubleshooting	M.Radhakrishnan	ISTE- Learning Materials 2001
4.	The complete PC upgrade and Maintenance	Mark Minasi	BPB Publication
5.	Inside the PC	Peter Norton	Tech Media
6.	Troubleshooting, Maintaining and Repairing PCs	Stephen J Bigelow	Tata MCGraw Hill Pub 2001
7.	Basic Refrigeration and Air-Conditioning	Ananthanayanan P.N	Tata McGrawhill Publishers

**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
019-HARDWARE SERVICING**

MODEL QUESTION PAPER

Time : 2 Hrs

Marks : 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions: All questions carry equal Marks.

1. What is a bus controller? State its use.
2. State any two demerits of Xeon Processor?
3. Expand the terms: (i) SATA (ii) BIOS (iii) CMOS (iv) USB
4. Define the term "Resolution". Explain its significance
5. Write the uses of key lock?
6. Write any three input and output devices.
7. State the advantages and disadvantages of Compact disks.
8. State any two features of SATA Hard disk drives,
9. State the difference between serial port and parallel port.
10. What is modem?
11. What are the file formats supported by scanner?
12. State the necessity of SMPS?
13. Write down the use of servo stabilizer and spike isolators.
14. What is POST?
15. What is Computer Virus?

PART – B (5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

- 16 A. Compare AMD Series, Athlon 2000 and Xeon processor [6]
(OR)
- B. With a neat block diagram explain the architecture 945 Chipset. [6]

- 17 A. Explain the different types of memory chips with neat diagram. [6]
(OR)
- B. Draw the block diagram and explain the operation of the CRT. [6]
- 18 A. Explain the construction and working principle of CD ROM. [6]
(OR)
- B. Briefly explain about the principle of operation of a Hard disk drive. [6]
- 19 A. Briefly explain the basic principle of operation of a scanner. [6]
(OR)
- B. Draw the block diagram of ATX power supply connection and explain its [6]
operation.
- 20 A. What is IPL Hardware? Explain. [6]
(OR)
- B. Draw the block diagram of UPS and explain its operation [6]

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
019-HARDWARE SERVICING
PRACTICAL (120 Hours)

1. Identification of System Layout:
 - a.) Front panel indicators and switches
 - b.) Front side and rear side connectors

2. Familiarize the computer system Layout : Making positions of SMPS, Motherboard, FDD, HDD, CD, DVD and add on cards.

3. BIOS set up: Configuring bios setup program and practicing the trouble shooting of typical problems using BIOS utility.

4.
 - a.) Install Hard Disk.
 - b.) Configure CMOS-Setup
 - c.) Partition HDD using FDISK
 - d.) Format Hard Disk.
 - e.) Master /Slave / IDE Devices.

- 5..
 - a.) Install and Configure a CD-Writer and a DVD writer.
 - b.) Recording a Blank CD and DVD.

6. Printer Installation and Servicing:
 - a.) Head Cleaning
 - b.) Install and configure Dot matrix printer and Laser printer
 - c.) Troubleshoot the above printers.
 - d.) Check and connect the data cable connectivity

7. Modem and TV Tuner card Installation:
 - a.) Install and configure Internal and External Modem
 - b.) Install and Configure TV tuner card.

8.
 - a.) NIC, Router Installation
 - b.) Installing NIC, router and Modem for XP / Linux environment.
 - c.) Configuring using device drivers
 - d.) Diagnosis and trouble shooting.

9.
 - a.) Install audio/video devices – microphone, speaker and head set and Digital camera.
 - b.) Trouble shoot the audio-video devices.
10.
 - a.) Install and configure Scanner . Trouble shoot the problems..
 - b.) Install and configure Web cam.
11.
 - a.) Identify the problems in Pentium System with add on Cards.
 - b.) Identify problems with software installation using drivers available in the motherboard CD.
12. Practice with scan disk, disk cleanup, disk De-fragmenter, Virus Detecting and Rectifying Software
13. Practice with back up and restoring data in a network server using external storage Device
14. Assemble a Pentium (II/III/IV) system with add on cards and check the working condition of the system.
15. Windows XP- Operating system Installation.
16. Install and Set up Dish connection to system.
17. Identify the connectors using wireless devices.
18. Interfacing the cell phone with system.

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE FOR WOMEN CANDIDATES ONLY
020-HERBAL BEAUTY AND AROMA THERAPY**

Duration : 6 Months

Classes : Two days per week

Hours : 2 Hours per day

Total Hours : 96

THEORY (36 Hours)

COURSE CONTENT : 1. Herbal beauty care
2. Skin care through aroma
3. Hair care through aroma
4. Herbal cosmetics
5. Business psychology

UNIT I 1. Study of herbal care for body
2. Study of herbal care for skin
3. Study of herbal care for hair
4. Study of herbal care for hands and legs
5. Study of home made herbal cosmetic

UNIT II 1. Study of uses of essential oil for skin
2. Study of relaxation through aroma therapy
3. Study of skin disorder treated through aroma therapy
4. Study of healthy skin through aroma therapy
5. Study of herbal beauty tips for skin

UNIT III 1. Study of uses of essential oil for hair
2. Study of relaxation through aroma therapy
3. Study of hair disorder treated through aroma therapy
4. Study of healthy hair through aroma therapy
5. Study of herbal beauty therapy for hair

UNIT IV 1. Study of herbal cosmetic for hair
2. Study of herbal cosmetic for skin
3. Study of cleansing herbal cosmetic
4. Study of protective herbal cosmetic
5. Study of beauty herbal cosmetic

UNIT V 1. Study of importance of good grooming
2. Study of professional ethics
3. Study of career opportunities for the beautician
4. Study of sanitization & sterilization
5. Study of planning for beauty parlor

020- HERBAL BEAUTY & AROMA THERAPY

MODEL QUESTION PAPER – I

Time: 2 Hrs

Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions, All questions carry equal marks.

1. Differentiate between herbal and general cosmetics.
2. How do you treat oily skin with herbal cosmetics?
3. How do you take care hand and leg with herbal cosmetics?
4. Define aroma therapy.
5. Name the basic categories of fragrance.
6. How do you extract the perfume?
7. Name the herbs used in hair conditioning.
8. Mention the properties of rose mary oil.
9. How do you treat dandruff with herbal cosmetics?
10. How do you treat pimple with herbal cosmetics?
11. Mention the herbal cosmetics used in facial therapy.
12. Mention the herbal cosmetics used in beauty therapy
13. Define sanitation.
14. How do you groom the body with herbal cosmetics?
15. Mention the factors responsible for beauty clinic planning.

PART – B

(5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

1. A . Describe the body relaxing massage strokes.
OR
B. Describe professional facial strokes with suitable sketch.
2. A. Describe the essential oils used for maintenance of skin .
OR
B. Herbal beauty tips for healthy skin.
3. A. Describe the scalp relaxing massage strokes.
OR
B. Explain herbal beauty tips for healthy hair.
4. A. Explain the effects produced by herbal cleansing cosmetics.
OR
B. Describe protective herbal cosmetics.
5. A. How do you maintain healthy body through aroma therapy?
OR
B. Mention the career opportunities available for beautician.

MODEL QUESTION PAPER – II

Time: 2 Hrs

Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions, All questions carry equal marks.

1. How do you treat dry skin?
2. Mention the herbal cleansing cosmetics.
3. Mention the raw materials present in herbal shampoo.
4. Name the herbs responsible for astringent properties.
5. Name the herbs responsible for cooling properties.
6. Name the herbs which gives glow to the skin.
7. Name the herbs used for colouring the hair.
8. Name the herbs which prevent hair falling.
9. Name the herbs used for hair conditioning .
10. List out the herbal protective cosmetics.
11. Mention the name of herbal nail cosmetics.
12. Mention the relaxing strokes for scalp treatment.
13. Define sterilization.
14. How do you preserve the herbal cosmetics?
15. List out any 5 oils present in herbal hair oil.

PART – B

(5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

1,A.. Explain the herbal cosmetics for hair.

OR

B. Describe the herbal skin cosmetics.

2.A. Describe the herbal cosmetics used for relaxation treatment.

OR

B. Explain the herbal cosmetics used for skin disorder.

3.A. Explain how do you maintain healthy hair by aroma therapy.

OR

B. List out the herbal cosmetics used for hair treatment.

4.A How do you prepare herbal cleansing cosmetics?

OR

B. How do you prepare the protective cosmetics?

5 A. Explain the effects of aroma oil responsible for grooming the skin, and hair.

OR

B. Write in detail about professional ethics for beautician.

020-HERBAL BEAUTY AND AROMA THERAPY
PRACTICAL (60 Hours)

1. Professional facial
2. Herbal facial therapy
3. Aroma facial
4. Professional body massage
5. Aroma scalp and hair treatment
6. Aroma body massage
7. Herbal bleaching
8. Pigmentation facial
9. Aroma manicure
10. Aroma pedicure
11. Professional spa manicure
12. Professional spa pedicure
13. Antiageing
14. Waxing
15. Bridal make up
16. Mehandhi designing
17. Body painting
18. Bridal hair style
19. Preparation herbal hair oil
20. Preparation of herbal mask

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
021-INDUSTRIAL CHEMISTRY

Duration : 6 Months
Classes : Two days per week

Hours : 2 Hours per day
Total Hours : 96

THEORY (30 Hours)

UNIT – I

Duration : 6 Hrs .

WATER TREATMENT

Sources of water – Hard water – soft water – hardness of water – temporary hardness, permanent hardness – methods of expressing hardness – mg/lit. PPM – Estimation of total hardness by EDTA method – disadvantages of hard water – scale formation in Boilers – softening of hard water – ion exchange, reverse osmosis methods.

UNIT – II

Duration : 6 Hrs.

ACID-BASE INDUSTRY

Acids and Bases – Simple definitions only – properties and uses of sulphuric acid, Nitric Acid, Hydrochloric acid and Phosphoric acid – aqua regia – Raw materials, properties and uses of sodium hydroxide, sodium carbonate and sodium bi carbonate - concepts of p^H and p^{OH} – Buffer solutions Acid buffer – basic buffer – applications of p^H in industries.

UNIT – III

Duration : 6 Hrs.

POLYMER TECHNOLOGY

Plastics:-

Types – thermoplastics, thermo setting plastics – differences – types of polymerization – addition polymerization – condensation polymerization – copolymerization – uses of polyethylene, polypropylene, PVC, Nylon, polystyrene, ABS, Teflon, Bakelite, polyester, polyurethane, silicones

Rubber:-

Natural rubber – preparation of Natural rubber from latex, vulcanization (no equation) – synthetic rubber – Buna-S, Thiokol - Neoprene – Raw materials preparation – application.

UNIT – IV

Duration : 6 Hrs.

FUEL TECHNOLOGY

Types of fuels – solid – liquid – gaseous Fuels - Calorific value – refining of crude petroleum – various fractions and their uses – octane number of petrol, cetane number of diesel – Anti knock compounds – tetraethyl lead – Gaseous fuels – LPG, water gas – producer gas and bio gas.

UNIT – V

Duration : 6 Hrs.

ENVIRONMENTAL CHEMISTRY

Air pollution – Green house effect, acid rain and depletion of ozone layer – control of air pollution - Water pollution – pollutants from dyeing industries and Tanneries, BOD and COD – waste water treatment.

Corrosion:-

Definition – types of corrosion – wet, dry corrosion (only concepts) – water line corrosion – stress corrosion (definition only) – prevention of corrosion – alloying – surface coatings – Galvanisation – Electro plating – Batteries, Primary, secondary, flow batteries.

Reference Books :

1. Jain & Jain – Engineering chemistry – Dhanpat rai & Co.,
2. Dara. SS – environmental chemistry & Pollution control – S.Chand & Co.,
3. SoniPL – Inorganic chemistry – Sultan Chand & Sons.
4. Experimental chemistry – Michell J.Sienko, Robert A.Plane, Stanely T.Marcus – International Student Edition (Sixth Edition)

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
021- INDUSTRIAL CHEMISTRY
MODEL QUESTION PAPER

Time: 2 Hrs

MAX. Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions: All Question carry Equal Marks

- 1) Define Hard water
- 2) Define permanent hardness
- 3) Write any two disadvantages of hard water.
- 4) Define acid
- 5) Define pH
- 6) Give the composition of aqua regia.
- 7) Differentiate thermosetting and thermoplastics
- 8) Write any two uses of PVC
- 9) What is meant by Vulcanization
- 10) Define octane number of petrol
- 11) Define calorific value of a fuel
- 12) Write the composition of Biogas
- 13) Define acid rain
- 14) What is meant by BOD?
- 15) Define green house effect

PART – B

(5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (a) or sub-division (b) of each question.

- 16 (a) Describe the estimation of hardness of water by EDTA method
(or)
(b) Explain the Ion exchange method of softening of hard water
17. (a) Write any FIVE applications of pH in industries
(or)
(b) Give the property and uses of sodium bi carbonate.
18. (a) Compare addition polymerization with condensation
Polymerization
(or)
(b) Give the properties and uses of (i) Buna-S (ii) Neoprene
19. (a) Discuss the various fractions and their uses of crude
petroleum
(or)
(b) Describe the manufacture of producer gas
20. (a) Describe any ONE method to control air pollution
(or)
(b) Discuss the steps involved in waste water treatment.

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
021- INDUSTRIAL CHEMISTRY
PRACTICAL (66 Hours)

1. Estimation of Hydrochloric acid by using sodium hydroxide solution (single titration)
2. Estimation of sulphuric acid by using sodium hydroxide solution (single titration)
3. Estimation of Nitric acid by using sodium hydroxide solution (single titration)
4. Estimation of temporary hardness of water by E.D.T.A. method
5. Estimation of permanent hardness of water by E.D.T.A. method
6. Determination of pH of acids and bases (colourimetric method)
7. Determination of pH of acids and bases (pH meter)
8. Determination of calorific value of the given fuel
9. Qualitative analysis of industrial effluents (identification of pb^{2+} , Zn^{2+} , Ca^{2+} , cu^{2+} ions)
10. Identification of polymers by ignition test
11. Determination of type of plastic by hot rod penetration method
12. Determination of dry rubber content of natural rubber latex
13. Determination of flash point and fire point of liquid fuels.
14. Production of a small plastic product by casting method.
15. Preparation of soap from oils using sodium hydroxide

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HEALTH INSURANCE

Mediclaim Policy (Individual) - Domiciliary Hospitalization Benefit - Bhavishya Arogya Policy

LIABILITY INSURANCE

Compulsory public liability Policy - Products liability Policy - Employer Liability Policy

UNIT – IV : MISCELLANEOUS INSURANCE

Burglary Insurance - Baggage Insurance - Fidelity Insurance -Television Insurance
Householders Insurance - Shopkeepers Insurance - Banker's Insurance Policies - Jeweler's
Block Policies - Sport Insurance - Special contingency Policy

CLAIMS

Legal Aspects -Surveyors and Loss Assessors -Claims documents Loss Minimisation

RURAL INSURANCES

Rural policies - The Role of government - Cattle insurance -Poultry Insurance
Inland Fish Insurance Schemes -Agricultural Pump Set Policy - Hut Insurance

UNIT-V : FUNDAMENTALS OF AGENCY LAW

Definition of an Agent -Insurance Agent under Insurance Act 1938 -What is bank assurance

PROCEDURE FOR BECOMING AN AGENT

IRDA (Licensing of Insurance Agent) Regulations 2000 - prerequisite for obtaining a license

FUNCTIONS OF THE AGENT

Proposal and other forms. - Organizations - salesmanship - Information technology - Intranet
and Internet

Benefits to Policy - Benefits to Policy holders/prospects

REFERENCE BOOKS:

1. Dr. A. MURTHY, Principles & Practice of Insurance, Margham Publication, Chennai.

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
022-INSURANCE
Model Questions

Time: 3 Hours

Marks:100

PART – A (4 X 10 = 40 marks)
(Answer any TEN questions)

1. What is Insurance?
2. What is a Contract of Insurance?
3. State the Contractual duties.
4. Write short notes on proposal forms?
5. Explain the term Endorsements.
6. Explain the terms Tariffs.
7. What is the necessity of fire insurance policy?
8. State the types of Marine policies.
9. What are the types of disablement in personal accident insurance?
10. Explain the term Baggage Insurance.
11. Explain the term special contingency policy.
12. Explain the term Poultry Insurance.
13. Define the term agent.
14. What is banc assurance?
15. Write notes on role of IRDA?

PART – B
(Answer ALL questions)

(12 X 5 = 60 marks)

16. Explain the purpose and need of Insurance.
(OR)
State the fundamental principles of Insurance.
17. Explain the basis of rate making?
(OR)
List out the Insurance documents – Explain.
18. Explain the rules for Motor Insurance.
(OR)
What do you understand by Marine Insurance? Discuss its importance in International trade?
19. Describe the various policies offered under business insurance?
(OR)
What are the legal aspects of claims?
20. What are the various functions of the Insurance agent?
(OR)
Explain the procedure for becoming an Insurance agent.

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

023-INTERNET

Duration : 6 Months
Classes : Two days per week

Hours : 2 Hours per day
Total Hours : 96

THEORY (36 Hours)

Unit I

Surfing the internet: World wide web- catalogs & crawlers – Gopher – email – File Transfer – Newsgroup – Library and educational sites.

What is internet: Background- structure – components – communications- connections – service providers – equipment – communications system – anatomy of URLs – Domain name services – internet errors

Unit II

Web browsing: Signing on the web – How to browse – how to search

Browsing configuration: How to Bookmark – configuration preferences- plugins – helper applications- online references

Gopher and File transfer

Unit III

e-mail :The mail window – Mailing actions- organizing mail – mail & news preferences- address book – signature file – mailing lists

News group: News window- finding newsgroups – newsgroup actions- reading and posting- Mail and news preferences

Issues and concerns: Parental control- censorship- commercialization – quality of information

Unit IV

Basic internet security: Importance of security- overview of windows update, Firewall, antivirus

Unit V

Introduction to HTML: Overview – viewing HTML- creating HTML

A tour of google.com page

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
023 - INTERNET**

MODEL QUESTION PAPER

Time: 2 Hrs

MAX. Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions: All Question carry Equal Marks

1. What is internet
2. What is world wide web?
3. How is world wide web organised?
4. Elaborate the terms .com, .org, .gov.
5. What is a browse?
6. List down any four browsers?
7. What are some browser skills you need to know?
8. Name any three browsers .
9. What is the purpose of firewall
10. Name some of the anti virus software
11. What is HTML?
12. Write any three tags and their purpose?
13. Write down the relevant command for scrolling with an example
14. What do mean by spam and trash
15. Create a table with two rows and two columns using HTML tags

PART – B (5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

1. a) Explain the relevant sketches about the dial up connection.
(or)
b) Explain about the broad band connectivity
2. a) Explain how the browsing configuration is being done?
(or)
b) Explain about Gopher and File transfer
3. a) Explain in detail about the news group.
(or)

- b) Explain the steps involved in creating an email account.
- 4. a) Explain the importance of firewall
 - (or)
 - b) Explain about the antivirus softwares
- 5) a) Explain in detail any three features available in google search
 - (or)
 - b) with relevant commands create a home page using HTML tags.

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DEPARTMENT OF TECHNICAL EDUCATION

ADD-ON TECHNICAL COURSE

023 - INTERNET

PRACTICAL (60 Hours)

Hands on practice

1. Surfing the internet
2. Exploring the different service providers
3. Creating email account
4. Downloading the softwares
5. Exploring different educational site
6. Subscribe to email newsletters
7. Find and download drivers
8. Installation of any one of the antivirus
9. Estimation of download time
10. Exercise on chat and voice chat
11. Browsing library catalogues online
12. Literature collection on a specific topic using google search
13. Exercises on Creation of HTML pages
14. Exercises on creating tables in HTML
15. Creation of your own website.

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
024- ISO AND TQM
MODEL QUESTION PAPER

Time: 3 Hrs

Marks: 100

PART-A (10 x 4 = 40 Marks)

Answer any **TEN** questions, All questions carry equal marks.

1. Define Quality.
2. What is Strategic Planning?
3. State any four barriers of TQM implementation.
4. Write short notes on customer satisfaction.
5. What is 5s?
6. What do you understand from term supplier partnership?
7. Give any four tools of TQM.
8. What is Bench Marking?
9. Write short notes on Taguchi Quality Loss function.
10. What is the need of ISO?
11. What is Quality Auditing?
12. State any requirement to get ISO 9000:2000 certifications.
13. What is Audit report?
14. State any three audit ethics.
15. What is Mock Audit?

PART – B

(5 x 12 = 60 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

16. A. Explain the basic concept of TQM.
(OR)
B. Explain the rule of senior management quality council in TQM.
17. A. Explain the Principles of TQM.
(OR)
B. Explain the process of performance appraisal.
18. A. What are the improvements needs in Total productive maintenance (TPM)?
(OR)
B. Explain the stages of FMEA.
19. A. Explain the elements of ISO 9000:2000.
(OR)
B. Explain the implementation of Quality system in an organization.
20. A. Narrate an Audit plan for a departmental store
(OR)
B. Give and explain the contents of a good check list.

DEPARTMENT OF TECHNICAL EDUCATION

**ADD-ON TECHNICAL COURSE
025 –JEWEL APPRAISAL**

Duration : 6 Months
Classes : Two days per week

Hours : 2 Hours per day
Total Hours : 96

THEORY (30 Hours)

Unit I **4hours**

-Basic Metallurgy -Elements-Metals-Non Metals-Semi Metals-Metals & Atoms-Chemical & Physical properties-Metals & Alloys-Ferrous & Non-Ferrous metals-Precious metals -Gold – Silver-Platinum-Base metals

Unit II **4hours**

-Alloying & Karatage of gold-Fine gold-Alloy gold-Binary alloy-Ternary alloy-Soldering alloy -KDM-Non KDM soldering (Cadmium)-Cadmium free jewellery-White gold-Pink gold-Green gold

Unit III **8hours**

-Calculations-Conversion of market gold price-Conversion of pure gold into karat gold-Conversion of karat gold into pure gold-Increasing the karatage of gold-Decreasing the karatage of gold-Estimating Plain Jewellery-Estimating Studded Jewellery-Jewel loan

Unit IV **8hours**

-Assaying & Refining Techniques-Destructive method-Non Destructive method-Fire assay-XRF
-Refining method-Aqua-regia-6karat parting-Silver refining-Hall marking-Hall marking in India

Unit V **6hours**

-Exposure to Jewellery manufacturing Process-Casting Technology & Bench working-Exposure to antique jewellery.

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
025 – JEWEL APPRAISAL**

MODEL QUESTION PAPER

Time: 2 Hrs

Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions, All question carry equal marks

- (1) The noblest metal is
(a) Gold (b) Silver (c) Cadmium
- (2) Fine gold solidifies at
(b) 964°C (b) 1064°C (c) 1000°C
- (3) Symbol of Gold, Silver and Platinum
(c) Au, Ag, Pt (b) Au, Ag, Pt (c) Al, An, Pd
- (4) The king of metal is
(d) Gold (b) Silver (c) Platinum
- (5) Copper melts at
(e) 2081°C (b) 1083°C (c) 1000°C
- (6) The largest mining country of gold is
(a) South America (b) South Africa (c) Russia
- (7) Gold dissolves in
(a) HNO₃ (b) H₂SO₄ (c) Aqua-regia
- (8) Content of Gold element in 21 karat is
(a) 87.50 (b) 86.50 (c) 85.50
- (9) Copper is added to Gold for
(a) Hardening effect (b) Better luster (c) Better atomic arrangement
- (10) Silver melts at
(a) 961°C (b) 1100°C (c) 860°C
- (11) Rhodium is a
(a) Platinum Group metal (b) Solder Metal (c) Base Metal
- (12) KDM is used for
(a) reducing the melting point (b) better hardening effect (c) good coloring effect
- (13) Melting point of Platinum is
(a) 1773°C (b) 1875°C (c) 1650°C
- (14) Mercury is a
(a) Precious metal (b) Liquid metal (c) Solder metal
- (15) Color of Copper is
(a) Red (b) White (c) Yellow

PART – B (5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (a) or sub-division (b) of each question.

(1) a. Explain Aqua-regia process

(OR)

b. How much pure gold must be added to raise 120 gram of 19-kt gold to 22-karat gold?

(2) a. Explain 6karat process

(OR)

b. What are the different methods being used for refining of gold? Explain any one process in detail?

(3) a. Explain Fire Assay process

(OR)

b. How will you find out whether the given jewellery is Gold or fake? Explain in detail

(2) a. Write notes about silver appraising?

(OR)

b. Define the following:

- (a) Alloy
- (b) Binary alloy
- (c) Ternary alloy

(5) a. Calculate the loan amount of the following Jewellery?

Item: Plain Necklace
Weight: 86.250 gram, Fineness: 20 kt
Loan amount: RS.900/g
22kt Gold market price: RS.1415/gram

(OR)

b. Explain Touch stone testing and reaction of acid & salt solution for the following karat
22Kt, 20Kt, 18kt, 16Kt & 14kt.

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DEPARTMENT OF TECHNICAL EDUCATION

**ADD-ON TECHNICAL COURSE
025 – JEWEL APPRAISAL**

PRACTICAL (66 Hours)

51 hours

1. -Touch Stone Practical
2. -Touch acid preparations
3. -Selection of Touch stones
4. -Touch sticks identification 999, 916 & 875
5. -Touch sticks identification 900, 835 & 800
6. -Touch sticks identification 750 & 585
7. -Touch sticks identification 660
8. -Colors differentiation
9. -Copper and base metals
10. -KDM Jewellery identification
11. -Weights and calculations
12. -Grains and coloring
13. -Studded Jewellery estimations
14. -Plain Jewellery estimations
15. -NaCl solution preparations
16. -Karat gold identification
17. -Fake Jewellery identification

15 hours

1. Silver Appraising
2. -Grading of Silver
3. -Estimating Silver vessels.

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE

026-MULTIMEDIA

Duration : 6 Months
Classes : Two days per week

Hours: 2 Hours per day
Total Hours : 96

THEORY (36 Hours)

Unit – I PhotoShop

Photoshop's Environment · Raster and Vector Graphics · Photoshop Environment Elements
Navigating in Photoshop

Basic photo editing tasks - zooming, cropping, file size reduction ,removing a background,
and changing the contrast on part of a picture

File Formats -Various pros, cons, and uses of common file formats.

Sizing images- How to open and close files -Pasting images -Cropping

Unit – II Image Manipulation in Photoshop

Selecting Image Areas · The Rectangular and Elliptical Marquee Tools · The Lasso Tools
Saving Selections · The Magic Wand Tool · The Magnetic Lasso Tool · Modifying Selections

Blending and Compositing : Defringing · Opacity and Blending Modes · Feathering Edges
Image Modes · Mode Characteristics · Grayscale and Bitmap Modes · Color Modes

Color and Painting · Selecting Colors · Painting Tools · The Clone Stamp Tool

Text, Layer Effects, and Filters: Type Layers · Layer Effects · Filters · Merging and Flattening
Layers

Adjusting Images: Brightness/Contrast · Levels Adjustment Layers · Toning Tools ·
Hue/Saturation Fixing the red eyes.

Unit – III Flash Basics & tools

Flash Editor, Panels, Timeline, Tools, Saving & Uploading Files Basic animation - Working in
the timeline - Working with symbols

Basic Drawing Tools Brush Tool: freehand painting tool. Paint Bucket Tool: fills enclosed
areas with colors or gradients. Arrow Tool and Sub selection Tool: Oval and Rectangle Tools:
Pen Tool: draws precise shapes point-by-point with adjustable vector curves.

Unit – IV Animation with Flash and Publishing

Shape tween staggering animation effect

Introduction to Motion Guide - Motion Guide Paths - Mask layers
Button Introduction
Introduction to scripting -Setting up your project
Publishing movies

Unit - V Web publishing with DreamWeaver

Internet Access and HTML - Planning Web Sites -The Dreamweaver Environment -Viewing and Managing HTML Code

Creating a Web Site - Defining a Web Site - Creating a Basic Web Page and Page Properties
Building a Web Site

The Site Panel and Templates - Adding Content to Web Pages - List Formats and Graphic File Types

Inserting a Table and Adjusting Table Properties - Using Graphics in Table Cells and Nested Tables
Using Table Layout View

Creating and Using a Repeating Region Template - Working with Links -Creating Internal and External Hyperlinks

Creating an Image Map and Anchors - Enhancing Navigation in a Site - Framesets - Reusable Navigation Bars

Managing and Uploading a Web Site - The Site Map

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DEPARTMENT OF TECHNICAL EDUCATION

**ADD-ON TECHNICAL COURSE
026 - MULTIMEDIA**

Model Question Paper

Duration : 2 Hrs.

Maximum marks:50

Part – A

10 x 2 = 20

Answer any 10 of the following in short. All Questions carry equal marks.

1. What is Raster graphics?
2. What is Vector graphics?
3. List the various graphic file format.
4. What is a bitmap image?
5. What is grayscale?
6. How will you adjust the brightness of a image?
7. List any two tools in Flash.
8. What is timeline?
9. Write notes on: freehand painting tool.
10. What is shape tween?
11. What is motion tween?
12. What is a flash Button?
13. What is HTML?
14. List any two properties of a web page.
15. What is a hyperlink?

Part – B

Answer all the questions by choosing either A or B of each question:

5 x 6 = 30

- 16 A. Describe the elements in Photoshop environment.
(OR)
B. Discuss the various photo editing techniques.
17. A. Describe the tools used of Image selection.
(OR)
B. Discus the various Text editing methods in Photoshop
18. A. Explain the Basic animation with respect to timeline.
(OR)
B. List and describe the drawing tools in Flash.
19. A. Explain the procedure of developing motion guide paths.
(OR)

B. Explain the steps to publish movies.

20. A. List and explain the steps involved to create Basic Web page and setting page properties.

(OR)

B. How will you create a Image map and anchors in a web page?

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DEPARTMENT OF TECHNICAL EDUCATION

ADD-ON TECHNICAL COURSE

**026 - MULTIMEDIA
PRACTICAL (60 Hours)**

Lab Exercises

Photoshop :

1. Create CD cover.
2. Create text and display in various format.(Shadow , Emboss effects)
3. Covert a color picture to black & white image.
4. Modify a picture using selection tools.
5. Given a picture of a flower with a background. Extract the flower and organize on a different background.
6. Given a picture. Adjust the brightness and contrast of the picture to give a better look.
7. Display the given picture through your name using mask.

Flash :

8. Create a motion tween and shape tween.
9. Create an animation to represent a growing moon using frame by frame animation
10. Create an animation to bounce a ball on steps.
11. Simulate movement of a cloud.
12. Draw the blades of a fan and make it work by giving proper animate.
13. Create a guided motion tween.
14. Create a spinning oval.
15. Create a flash application to scroll text with in a text box.
16. Create a fade in , fade out object using flash.
17. Create a zoom animation and ripple effect.
18. Mask a photo
19. Create a button using flash.
20. Create an Action script to execute for a event in a Flash application.

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DEPARTMENT OF TECHNICAL EDUCATION

ADD-ON TECHNICAL COURSE

027 - DOT NET

Duration : 6 Months

Classes : Two days per week

Hours: 2 Hours per day

Total Hours : 96

THEORY (36 Hours)

Unit – I .NET Technology

What is .NET? Why .NET? Advantages of .NET. -

Understanding CLR – Just-in-time (JIT) compiler – MSIL (Microsoft Intermediate Language) -
Common Type System – Common Language specification – Languages under .NET
(definitions only)

Basic Programming rules - Data Types - Value Types- Reference Types-Variable
Declaration and Initialization

Writing first program - Compilation process with VBC - Using the *imports* keyword
Literals, Unicode Characters and Strings - Operators - Conditional Statements- Looping
Statements

Unit – II GUI Programming with VB.NET

Introduction to GUI application and their components – Elements for GUI programming –
controls- properties – methods – events.

Interacting with controls – Label, TextBox, Picture, ListBox, ComboBox, RadioButton,
Progress Bar, DateTimePicker – Panel – Group Box

Creating dialog with MessageBox.Show() - simple dialogs

Unit – III Database programming with ADO.NET

Introduction to ADO Technology - ADO vs. ADO.NET - Types of ADO.NET operations and
namespaces - System.Data - System.Data.Odbc - System.Data.OleDb -
System.Data.SqlClient -System.Data.OracleClient

ADO.NET classes- xxxConnection classes -xxxCommand classes - xxxDataReader classes -
xxxDataAdapter classes

Data retrieval methods- Connected - Disconnected- Disconnected operations with -
DataTable- DataSet

Data Binding with DataGridView and ComboBox controls -Introduction to ConnectionString -

Components of ConnectionString

Unit – IV Web Programming with ASP.NET

Web Programming Concepts - Introduction to Web Programming Client/Server technology in Internet Environment - Understanding Web Server IIS - How Internet and Intranet works - Creating Virtual Directory and Websites

Hyper Text Markup Language- Understanding the Browser-Standard language for web HTML
- Tags used in HTML -Creating HTML pages with HTML control with Visual Studio
Working with Server Controls -Standard Controls -Label, Text, Image - Button, LinkButton, ImageButton – DropDownList - Navigation Controls - HyperLink, ImageMap, Menu

Unit - V Data Access using ASP.NET

Data Source controls – AccessDataSource – SqlDataSource.

Database operations with Data Source controls – Insertion-Update – Deletion -Selection

Validation Controls in ASP.NET -Introduction - RequiredFieldValidator – RangeValidator - CompareValidator - RegularExpressionValidator – CustomValidator -ValidationSummary
Intrinsic Objects under ASP.NET - Request object- Response object- View State object

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**DEPARTMENT OF TECHNICAL EDUCATION,
ADD-ON TECHNICAL COURSE
027 – DOT NET
Model Question Paper**

Duration : 2 Hrs.

Maximum marks:50

Part – A

10 x 2 = 20

Answer any 10 of the following in short, All questions carry equal Marks

1. What is CLR?
2. What is JIT?
3. What is the use of import statement?
4. List down the elements of GUI programming
5. Write any two basic VB.NET controls.
6. What is a dialog?
7. List the different namespaces in ADO.NET for data accessing.
8. What is a Command object?
9. What are the types of data retrieval methods?
10. What is client/server technology?
11. What is HTML?
12. List any two server controls.
13. Write notes on SqlDataSource.
14. Write notes on RangeValidator.
15. What is viewstate?

Part – B

5 x 6 = 30

Answer all the questions by choosing either A or B of each question:

16 A. What are the advantages of .NET?

(OR)

B. Discuss the Conditional statements in VB.NET.

17. A. Write a VB.NET application to develop a simple GUI application.

(OR)

B. What are the components of a GUI application? Explain.

18. A. Compare ADO.NET with ADO.

(OR)

B. Discuss the ADO.NET operations in detail.

19. A. Discuss the operation of IIS server in detail.

(OR)

B. Develop a Web application using Server controls.

20. A. Explain any two validation control.

(OR)

B. List the Intrinsic objects in ASP.NET and explain

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

027 – DOT NET

PRACTICAL (60 Hours)

Lab Exercises

1. Write a VB.NET code to accept a string and convert the case of the string.
2. Develop GUI application to implement simple calculator using VB.NET.
3. Develop GUI application to pick Month from Calendar control.
4. Develop a dialog based application to accept input from user and display. Use built-in dialog statements.
5. Create a simple web page using ,Table ,background and IMG using HTML tags.
6. Create a web page using HTML tags that incorporate <FORM> elements to accept input such as Name, DOB, Sex, qualification etc.
7. Create a simple login and registration form using common controls and validate data entered
8. Develop a web application to validate the email address entered using RegularExpression validator.
9. Develop a web application to fill a combo box from the column of a table.
10. Develop a Web application to find the biggest of 2 numbers entered in Textbox.
11. Design an ASP.NET application to prepare student marksheet using any database.
12. Design an ASP.NET application to prepare employee pay slip using any database.
13. Develop a web application to display records using Data Grid view.
14. Develop a web application to add, edit and modify records using Data Grid view.
15. Develop a web application using Request, Response objects.

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DEPARTMENT OF TECHNICAL EDUCATION
GUINDY, CHENNAI – 25
ADD-ON TECHNICAL COURSE
028-OFFICE AUTOMATION

Duration	: 6 Months	Hours : 2 Hours per day
Classes	: Two days per week	Total Hours : 96

Unit – I Introduction to Computer

Definition of Computer, Characteristics of Computers hardware, software, block diagram of a personal computer – secondary memory

Memory : Meaning of bit, byte, word, KB, MB, GB; Semiconductor memory – definition and purpose of RAM, ROM, EPROM, EEPROM – Floppy disks usage, sizes and capacities, organization of Floppy disk, Hard disk – Usage, capacities, organization of hard disks – CD ROM drive – usage, capacities and organization.

UNIT- II Ms-Word

1. Creating a document – Copying and moving text – Formatting the document (Font, Paragraph, Bullets & Numbering, Page Setup)
2. Inserting Page breaks – Page Numbers – Pictures – Application of Header & Footer.
3. Creating Tables – Entering Text – Formatting table – Using Formulas
4. Mail Merge – Letter – label – Envelope

UNIT-III Ms-Excel

1. Create Database – Formatting Cells – Insert Row, Column
2. Creating a table for Payroll program using formulas – Conditional Formatting
3. Creating a table for Result processing by using Conditional statements – Aligning text & Numbers.
4. Creating Database – Sort Records – Filter
5. Create Pivot Table Report

UNIT-IV Ms- PowerPoint

1. Create a new presentation using Blank presentation – Formatting text and applying designs and background of slide
2. Create a new presentation using Templates – Apply Custom animation, Slide Transition,
3. Sound effect – View show
4. Create a new presentation using Auto Content Wizard – apply Rehearse Timing – Setup Show – Speaker Notes

UNIT-V Ms- Access and Tables and Query

Tables: Creating table – Field size – Caption – Default value – Validation rule – Validation text required – Allow zero length – Indexed Unicode – Compression – Decimal places. Query: Creating query in design view – creating query by using wizard

Forms: Label- Text boxes – Option group – Toggle button – Option button – Check box – Combo box – List box – Command button – Create forms by using wizard. Reports: Creation of report.

Reference:

1. Vikas Gupta, Comdex Computer Course Kit (XP Edition), Dreamtech publish, NewDelhi.

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DEPARTMENT OF TECHNICAL EDUCATION

ADD-ON TECHNICAL COURSE

**028-OFFICE AUTOMATION
MODEL QUESTION PAPER**

Time: 3 Hours

Marks:100

PART –A 10 X 2 = 20

Answer any Ten Questions. All Questions carry equal Marks.

1. Define Computer?
2. Write Four Characters of a computer?
3. What is hard dist?
4. How will you move a text to another document?
5. How will you customize bullets to the text?
6. What is header and footer?
7. How will you insert a row?
8. How will you delete a work sheet?
9. What is the use of formulae bar?
10. What is slide sorter?
11. What slide layout?
12. How many Sub-menus in the permission menu?
13. How will you create a black table?
14. How may table wizard?
15. What is the validation rule in Access?

PART – B

Answer Five questions, Choosing one from each unit

5 x 6 = 30

- I. 1. What are the advantages of a Computer?
(OR)
2. Draw the Block diagram of a computer and Explain it?
- II. 1. Write the drop down menus under the format menu?
(OR)
2. Write the procedures for create a Mail Merge Letter?
- III. 1. Write the steps to arrive the result of a Mark Sheet using conditional statement?
(OR)
2. How will create a Pivot Table report?
- IV. 1. Write the steps to crate slide applying slide background, Slide Transition, and sound effect.
(OR)
2. Write the steps to crate setup show by applying rehearse Timing
- V. 1. Write the steps to be used to create a label form using the existing Table
(OR)
2. Write the procedures to create a Repot form using the Existing Table.

* * *

DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
028-OFFICE AUTOMATION
MS-OFFICE - Exercises
Ms-word

EXERCISE - I

What is DTP?

Long ago (it seems), When people wanted to put together a brochure, leaflet, poster or news letter, they were quite content to bash away at a typewriter, use felt tip pens and sometimes , for that really special look rub down instant lettering. How happy we all were in our innocence. These days every one expects so much more, in finished quality, in speed and in convenience. These factor that has raised out sights above our former neivete is the relatively recent blossoming of desktop publishing commonly called DTP.

DTP is the latest in a series of technological advances in printing as Gutenberg's invention (and Caxton's bringing to England) of movable type changed the way that books were produced and made them accessible to a wider public for the time. So DTP has brought a substantial part of the process within the reach every one. Wit DTP you have almost complete control over every element of the page, the size and style of lettering and the size and position of all sorts of pictures from the kinds of sources, can be changed in a moment.

Such a power is not without its responsibilities, however, DTP relies on the careful dovetailing of a number of separate skills and is not something that you can expect to get the hand of straight away. Even the manuals can only tell you what to do to achieve certain effects, they won't explain what you ought to be trying to do. Don't be discouraged though nothing worth accomplishing comes without effort. The other side of the coin is the enjoyment of spending time on a project and achieving a printed product that not only pleased you but also impresses your family, your friends - and your clients. Make no mistake about it. DTP is more than just an absorbing away to pass the time, it is creative and fun, and can be profitable.

Do the Following:-

- 1.Type the above text in your file and save
2. Copy the file into another and gave different name.
3. Apply the bold face for the heading.
4. Align the first para into justified, Second para right justified and third para left justified
5. Apply 1.5 line space
6. Change the font type as Arial
7. Change the heading into upper case, italics and put underline
8. Insert your Name on header and Date in the left footer
9. Insert Page number in the center of the footer
10. Take out a print.

EXERCISE - II

desk top publishing

Long ago (it seems), When people wanted to put together a brochure, leaflet, poster or news letter, they were quite content to bash away at a typewriter, use felt tip pens and sometimes , for that really special look rub down instant lettering. How happy we all were in our innocence. These days every one expects so much more, in finished quality, in speed and in convenience. These factor that has raised out sights above our former neivete is the relatively recent blossoming of desktop publishing commonly called DTP.

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Do the Following:-

1. Save the Exercise-I document into another document using "Save As" Command.
2. Center the Title and Change the character into upper case
3. Put border to the heading and 20% gray shading
4. Apply **Drop Caps** for 1st letter of each para for 3 lines
5. Divide the text into two equal Columns
6. Insert a Cartoon Picture in the Center of the text in the Wrap mode
7. Type the Institution Address in top right side corner using Text Box, Fill the text box with a suitable light colour and remove the border line of the text box
8. Spell Check the document and correct all the mistaken words.
9. Take out a print

EXERCISE - III

Lloyds New India Pvt. Ltd.

April 21, 2004

Dr. G.D. Gayish
Welcome Decorators
41, Chenoy Building
New Delhi - 500 123

Dear Mr. G.D. Gayish

Subject: Purchase of Welcome Furniture

With reference to your quotation and catalogue for the selected Welcome furniture items for our office, we are pleased to place an order for the following items. These items are in addition to the ones ordered earlier by us (as per our letter dated 21 May' 2004) and must be delivered along with the rest of items.

	Nos.
Large Mahagony Desk (#1001)	3
Burma Teak Wood Writing Desk (#1102)	4
Cherry Wood Side Bureau (#11103)	5
Oak Wood Side Panel (#11202)	6
Maharaja Chair (#11303)	7

As specified to you earlier, the purchase shall be as per the following terms and conditions

Prices would be as per your catalogue less 15%

Delivery would be made within three weeks

Transportation charges would paid at actuals.

Payment would be within one week of delivery of goods

Kindly send an immediate confirmation . Thanking you and looking forward to meeting you very soon.

Sincerely

Mathan Mithra

Manager Administration

-
1. Type the above text in your file and save
 2. Type the company address at the top right corner using text box
 3. Format the Company Name suitably using Word Art
 4. Apply the Number Bullets for items
 5. Apply custom bullets for the terms and conditions
 6. Apply Comic Sans font and provide uniform space between the Characters for Subject line.
 7. Prepare a Logo using the Characters of "LNP" and place it on the top left corner
 8. Take out a print

EXERCISE - IV
BRINDHAVAN INDUSTRIES PVT. LTD.
11, Mailai Nagar, Adyar, Chennai 20

Production Summary of various Units in every Quarter

Company Name	Jan-Mar	Apr-june	July-Sept.	Oct-Nov
Unit - I	124	56	234.50	74
Unit - II	142	236	126.75	251
Unit - III	213	541	216.60	143
Unit - IV	125	243	127.50	136
Unit - V	143	152	138.80	145

1. Prepare the statement by setting the following Tabs
0.5, 2, 3, 4, 5.
2. Use Decimal Tabs in the Fourth Column.
3. Put Border to the Summary Title and fill with 15% gray colour
4. Take out a print.

EXERCISE - V

MEGASUPER PRODUCTIONS PVT. LTD.
#101 Bose Road, Adyar, Chennai -20

EXPENSES STATEMENT FOR THE YEAR 2000

S.NO.	DEPARTMENTS	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	TOTAL
RUPEES IN LAKHS						
1.	Administration	25.65	24.34	26.24	23.87	
2.	Production	45.23	46.26	48.76	44.75	
3.	Accounts	13.15	14.26	15.12	12.78	
4.	Advertisement	35.62	40.25	42.18	38.40	
5.	Personnel	15.12	17.28	20.15	19.24	
6.	Catering	26.15	28.42	24.64	21.27	
7.	Material	51.23	56.73	59.15	54.78	

Total

Do the Following:-

1. The above text in a table format
2. Put Total of all columns
3. Merge the columns appropriately
4. Save the file take out a print

EXERCISE - VI
MAIL MERGE - FORM LETTERS
MAIN DOCUMENT

ASSOCIATE SOFTWARE POINT INDIA LIMITED
C.I.T. CAMPUS, THARAMANI, CHENNAI - 113.

Ref:- 101//admn/pd/20

Dated: 10- 01 - 2004

To

Dear (NAME)

With reference to your application in response to our advertisement number 4/93 dated: 16-05-2004 for the post of Junior Stenographer (English) in our head office, you are requested to appear in the written examination in General English and General Knowledge on 24th August 2004 at 10.00 a.m. at the following examination center:

Faculty of Arts,
University of Delhi,
Delhi - 111 007.

Please note that:

1. You should bring your own pen/ball pen. Answer book will be supplied by us at the examination hall.
2. You should report at least 15 minutes before the commencement of the examination on the date and place mentioned above.
3. No. TA/DA will be paid for the above examination.
4. Candidates qualifying the written examination will be called for the shorthand test at a later date.
5. The candidates may write to the undersigned for any clarification or for change of examination center within two weeks of receipt of this letter.

(D.P. CHAUDRY)

PERSONNEL MANAGER

Do the Following

1. Type the above letter as Mail merge Main document
2. Prepare FIVE letters carrying the following different address using Mail merge procedure

ADDRESS:

1. V. Ashok , #41 Sannathi Street, Center Nagar, Broad way, Chennai - 600 001
2. P. Govindh, # 21 Rich Street, Aluwa Nagar, Thampanoor, Trivandrum- 45
3. M. Raghuram, #22, I street, Rrivel Nagar, Bangalore - 500 002
4. A. Ananthi, #12 Main Street, Kalai Nagar, Hyderabad - 400 015
5. D. Abhilash, #27, Down Street, Sai Nagar, Mumbaim - 200 020

MS - EXCEL - EXERCISE

EXERCISE - 1

ENTER THE DATA IN YOUR WORKSHEET AND FINDOUT THE TOTAL CLASS
ROUND THE CLOCK

FLIGHT NUMBER	SEATS IN FIRST CLSSS	SEATS IN ECONOMY CLASS	SEATS IN BUSINESS CLASS	TOTAL CLASS
A001	200	300	450	
A002	180	275	400	
A003	175	250	425	
A004	125	325	375	
A005	200	350	350	
A006	250	300	400	
A007	220	350	450	
A008	200	250	450	
A009	175	225	425	
A0010	150	275	450	

EXERCISE - 2

ENTER THE DATA IN YOUR WORKSHEET AND FINDOUT THE TOTAL SALES FOR
THE MONTH

SALES STATEMENT FOR THE FIRST QUATER

SL. NO.	NAME OF THE ITEM	RATE PER UNIT	NUMBER OF ITEMS	TOTAL SALES
1	AUDIO SYSTEM	12400	5	
2	TELEVISION(21")COLOUR	14200	7	
3	TELEVISION(24")COLOUR	22500	4	
4	MIXIE	4250	8	
5	GRINDER	5400	6	
6	GAS STOVE	6200	10	
7	FRIDGE	12750	7	
8	WASHING MACHINE	8750	9	
9	AIR CONDITIONER	14550	4	
10	COMPUTER	24500	5	

EXERCISE - 3

ENTER THE DATA IN YOUR WORKSHEET AND FIND OUT THE MONTHLY PAYMENT USING FUNTIONS

LOAN CALCULATOR

Interest Rate	10%	10.50%	11%	11.50%	12%
Terms(Months)	24	30	36	42	48
Loan Amount	25000	50000	100000	200000	500000
Monthly payment					

EXERCISE - 4

COLOMBIA RICHLAND LIMITED
Carol Pagh, House Gause, New Delhi.

PAYROLL FOR THE MONTH OF JANUARY 1997

SL. NO.	EMPLOYEE NAME	DESIGNATION	BASIC	DA	HRA	CCA	PF	IT	NET SAL-ARY
1	Bill Hates	Gen. Manager	12500						
2	Bindur Gujral	Per. Manager	8750						
3	R. Bata	Chief AcCnt.	9500						
4	Lorry Ellison	Pro. Manager	7500						
5	Mano Singh	Pro. Eng.	7800						
6	Birla Baul	Field Asstant	5800						
7	Scot Rolls	Acc. Assistant	6200						
8	Steve Knobs	Sales Manager	10400						
9	Chitta Brown	Sales Exe.	11500						
10	Watch Steve	Advt. Manager	9500						
	TOTAL								

Note:

1. Dearness Allowance (DA) is Paid @ 33.33% of Basic Pay
2. House Rent Allowance (HRA) is paid @ 15% of Basic Salary + DA Combined together.
3. City Compensating Allowance(CCA) is paid @ 7.8% of Basic Salary+DA+HRA Combined together.
4. Provident Fund (PF) is deducted @ 8.99% of Basic Salary + DA + HRA + CCA Combined together
5. Income Tax (IT) is deducted @ of 10% of Basic Salary + DA + HRA + CCA Combined together
6. Net Salary is Summation of Basic Salary + DA + HRA + CCA + Less PF + IT.

EXERCISE -5

ENTER THE DATA IN YOUR WORKSHEET AND FIND OUT THE MONTHLY PAYMENT USING GOAL SEEK COMMAND

LOAN CALCULATOR

Interest Rate	10%	10.50%	11%	11.50%	12%
Term (Months)	24	30	36	42	48
Loan Amount	50000	75000	100000	150000	200000
Monthly Installment					

EXERCISE - 6

EMPLOYEES PAY ROLL DATA USING IF & ELSE FUNCTION

EMPNO	NAME	GRADE	BASIC	HRA	GPF	GROSS	ALLOW	IT	NET
A001	ANAND.P	A4	7400						
A002	MOHAN.A	A1	5500						
A003	SIKKANTH.T	A5	4800						
A004	MALIGA.P	A2	5200						
A005	BASKER.N	A3	7600						
A006	RAJANLAL.D	A4	6800						
A007	HARIDEV.G	A2	5600						
A008	MEHALA.B	A5	4100						
A009	JOSHIBA.S	A1	8300						
A010		A3	6300						

1. Fill the HRA by using the below mentioned instructions:

If the Grade of an Employee is A1, HRA is 10% of Basic Pay

If the Grade of an Employee is A2, HRA is 15% of Basic Pay

If the Grade of an Employee is A3, HRA is 20% of Basic Pay

If the Grade of an Employee is A4, HRA is 25% of Basic Pay

If the Grade of an Employee is A5, HRA is 30% of Basic Pay

2. Insert DA Column after Basic Column and fill it as 40% of Basic

3. Fill the GPF with 40% of Basic + DA

4. Fill the Allowance using the following instruction

If the Employee's Basic Salary is more than or equal to Rs. 6000/- they will be paid 25% Of Basic Salary otherwise (less than Rs. 6000/- 10% of Basic pay.

5. Fill the IT by using the following instruction:

If the Basic greater than 6000 and Gross is Greater than 10000, then the IT(Income Tax) is 15% of Gross, otherwise no IT deduction

6. Fine the Net Salary of all Grade

7. Give the heading Employees Pay Roll Data and take out a print.

EXERCISE - 7

HINDUSTAN SENIOR SECONDARY SCHOOL
ADYAR, CHENNAI - 600 020

STUDENT RESULT REPORT FOR THE YEAR 2001-2002 - STD. X -A

REG. NO.	NAME	SUB1	SUB2	SUB3	SUB4	TOTAL	AVERAGE	RESULT
5001	RAVI S.	65	84	75	90			
5002	KANDAN P.	35	45	53	28			
5003	PANDIAN K	54	65	45	52			
5004	RAJARAM V	66	68	45	56			
5005	VINOD L	55	62	58	74			
5006	ARAVIND G	54	64	75	67			
5007	DINESH V.	32	45	65	68			
5008	GOVIND D.	52	45	65	72			
5009	SUDARSAN	74	58	62	52			
5010	PINTHU B.	32	65	68	54			

Do the following:

1. Calculate Total Marks (Sub1 to Sub4) and fill the Total Column
2. Calculate Average Marks of each student using function
3. Fill the Result Column by using the following condition.
 - a. Student who secured 40 or more than 40 Marks in each subject will be declared as pass.
4. Insert a column after the Result column, name it as DIVISION and fill that using the following condition:
 - a. Student secured more than 59 declared as I class
 - b. Student secured more than 49 declared as II class
 - c. Less than 49 declared as III class
5. Save the file and take out a print.

EXERCISE - 8

WINSOFT COMPANIES INDIA LIMITED.
PROFIT AND LOSS STATEMENT FOR THE YEAR 2001

Sales	100000
Cost of Purchase ... (35% of Sales)	*****

Gross Profit(Sales - Cost of Purchase)	*****

Expenses:	
Advertisement(18% of Gross Profit)	*****
Salaries	22000
Electricity	2000
Telephone	5780
Miscellaneous Expenses	2100
	----- *****

Profit (Gross Profit - Total Expenses)	*****
Less: Income Tax (35% of Profit)	*****

Net Profit (Gross Profit - Income Tax)	*****

Do the Following:-

I. Write the formula in the appropriate Cells to achieve the following:-

1. Calculate Purchases as 35 per cent of sales
2. Calculate Gross Profit as (Sales - Purchases)
3. Calculate Advertisement as 28 per cent of Gross Profit
4. Calculate Total Expenses as Advertisement + Salaries + electricity + Telephone + Miscellaneous
5. Calculate Profit as Gross Profit - Total Expenses
6. Calculate Income Tax on Profit as 35 per cent of Profit,
7. Calculate Net Profit as Income Tax deducted from Profit.

II. If Profit is more than 25,000 the Income Tax Rate will be 35 per cent other wise the rate will be 22 per cent.

* * *

EXERCISE - 9

VIVEK & CO. PVT.LTD
CHENNAI - 600 020

SALES REPORT FROM JANUARY, 1999 TO MARCH, 1999

MONTH	CITY	PRODUCT	QUANTITY
JAN'99	CHENNAI	TELEVISION	18
JAN'99	BANGALORE	TELEVION	15
JAN'99	CHENNAI	WASHING MACHINE	12
JAN'99	HYDERABAD	REFIGERATOR	15
JAN'99	BANGALORE	WASHING MACHINE	10
JAN'99	HYDERABAD	WASHING MACHINE	8
JAN'99	CHENNAI	REFIGERATOR	18
FEB'99	HYDERABAD	TELEVION	12
FEB'99	CHENNAI	TELEVION	15
FEB'99	BANGALORE	REFIGERATOR	15
FEB'99	HYDERABAD	WASHING MACHINE	10
FEB'99	CHENNAI	REFIGERATOR	11
FEB'99	HYDERABAD	REFIGERATOR	9
FEB'99	CHENNAI	WASHING MACHINE	12
FEB'99	BANGALORE	TELEVION	18
FEB'99	BANGALORE	WASHING MACHINE	9
FEB'99	HYDERABAD	REFIGERATOR	13
MAR'99	CHENNAI	WASHING MACHINE	11
MAR'99	BANGALORE	TELEVION	12
MAR'99	HYDERABAD	REFIGERATOR	19
MAR'99	CHENNAI	TELEVION	19
MAR'99	BANGALORE	REFIGERATOR	8
MAR'99	HYDERABAD	WASHING MACHINE	18
MAR'99	CHENNAI	REFIGERATOR	20
MAR'99	BANGALORE	WASHING MACHINE	19
MAR'99	HYDERBAD	TELEVION	22

1. Sort City and Product in ascending order
2. Filter the date i.e. city = Chennai and Product =Television

EXERCISE - 10

ENTER THE FOLLOWING DATA IN MS EXCEL WORK SHEET AND CREATE THE COLUMN GRAPH WITH NECESSAARY LEGENDS, DATA LABELS AND TITLES.

SALES DATE OF I QUARTER

BRAND NAME	JANUARY	FEBRUARY	MARCH
	RUPEES IN LAKHS		
ARABICA	234	255	210
KONE	124	130	127
FRENCH ROAST	155	170	185
MOCHA	295	320	310
COLOMBIAN	220	180	170
VANNILA ROSE	125	140	160
ESPRESSO	230	250	210

EXERCISE - 11

CREATE A BAR CHART WITH THE FOLLOWING DATA

FLIGHT PASSENGERS REPORT FOR 1997

QUARTER	TOTAL PASSENGERS
I	510
II	450
III	630
IV	230

EXERCISE - 12

CREATE A 3D CHART WIT THE FOLLOING DATA

STATE ELECTRICITY BOARDS REVENUE REPORT

STATES	2001	2002
	RUPEES IN CRORES	
ANDHRA PRADESH	12000	14500
KARNATAKA	11400	13600
KERALA	15200	17500
TAMILNADU	13400	14600

DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
029 – PCB MAKING

Duration : 6 Months
Classes : Two days per week

Hours : 2 Hours per day
Total Hours: 96

THEORY (30 Hours)

UNIT – I : ELECTRONICS COMPONENTS & MOUNTING

Hrs: 6

Active and passive components – resistor, capacitor, inductor, semiconducto, diode, LED, zener diode, Bipolar junction transistor, IC’s, SMD, connectors use of multimedia & CRO. Preparation & mounting of components – lead cutting.

UNIT – II :BASIC OF PCB & SOLDERING TECHNIQUES

Hrs: 6

Introduction – Classification of PCB – single, double, multilayer and flexible boards – copper clad laminates materials of copper clad laminates – manufacturing process – properties of laminates (electrical & physical) - types of laminates. Hand soldering Tools Solder alloys – soldering flexes – soldering techniques – Iron soldering – mass soldering, DIP soldering – wave soldering – solder mask.

UNIT – III: SCHEMATIC & LAYOUT DESIGN

Hrs: 6

Schematic diagram – Net list – Design rule check – creating components for library – Imperial – metric Tracks – Pads – Vias – Clearances – Rats nest – silk screen – selection of board size – power plane – grounding

UNIT – IV: DESIGN OF PCB’S

Hrs: 6

Single sided PCB – Double sided PCB – Multilayer PCB – Auto routing – manual routing – Design rule check – creating of foot print for library creating Gerber file.

UNIT – V: PCB FABRICATION

Hrs: 6

Film master preparation - Image transfer - photo printing – Screen Printing - Plating techniques etching techniques – Mechanical Machining operations.

REFERENCES:

1. Printed Circuit Board – Design, Fabrication, Assembly & Testing by R.S.Khandpur, TATA McGraw Hill Publisher
2. Printed circuit Board – Design & Technology by Walter C.Bosshard
3. ISTE Hand book on Printed Circuit Board Fabrication.

* * *

DEPARTMENT OF TECHNICAL EDUCATION

ADD-ON TECHNICAL COURSE

029-PCB MAKING

MODEL QUESTION PAPER

Time: 2 Hrs

MAX. Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions: All Question carry Equal Marks

1. Define passive and active components with an example.
2. Write short notes on zener diode.
3. What are the uses of CRO?
4. Write down the properties of electrical laminates.
5. List out soldering techniques
6. Differentiate iron soldering and wave soldering
7. Define net list.
8. How do you select the size of board.
9. What is meant by metric tracks?
10. Classify PCBs.
11. Define routing.
12. Differentiate single sided PCB and double sided PCB.
13. How do you prepare film in PCB fabrication?
14. Write short notes on screen printing.
15. List out the differing techniques of etching process.

PART – B (5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

1. (A) Explain in detail about the different classification of PCB?
(or)
(B) Describe in detail about the different types of laminates?
2. (A) Explain about iron soldering?
(or)
(B) How do you manufacture PCB
3. (A) Write notes on design rule check.
(or)
(B) Explain the followings
1. Pads. 2. Vias. 3. Rats nest.

4. (A) Explain about double sided PCB.

(or)

(B) Explain the followings. 1. Manual routing. 2. Auto routing.

5. (A) Discuss about plating techniques

(or)

(B) Write short notes on photo printing.

* * *

DEPARTMENT OF TECHNICAL EDUCATION

ADD-ON TECHNICAL COURSE

029-PCB MAKING

PRACTICAL (66 Hours)

Design the following Schematic Using ORCAD Software

1. Half wave Rectifier
2. Full wave rectifier
3. Clipper
4. Bridge Rectifier
5. Clamper
6. Half Adder
7. Full Adder
8. Square wave generation using 555 Timer
9. Digital Clock
10. Power Supply
11. Radiation sensor
12. Stereo headphone amplifier
13. Automated line – following robot
14. Microcontroller – based solar charge
15. Lamp dimmer using Triac and Diac
16. Emergency Lamp
17. High current DC Motor Controller
18. PC – Based wireless appliance control
19. Generator Room Light
20. Liquid Level alarm.

* * *

DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
030-PRINCIPLES OF TALLY

Duration : 6 Months
Classes : Two days per week

Hours : 2 Hours per day
Total Hours : 96

UNIT - I - INTRODUCTION TO TALLY

Opening Screen of Tally – Creating Company – Loading / Selecting a Company – Altering company – Shutting Company – Deleting Company – Buttons on the Button Panel – Configuring Company.
GROUPS: Managing Groups – Creating New Single and Multiple Group – Displaying Group – Altering Group – Deleting Group .

UNIT – II - ACCOUNTING INFORMATION

LEDGERS – working with ledgers – Creating Single and Multiple Ledger – Displaying Ledgers – Altering Ledgers – Deleing Ledgers

VOUCHER: Creating/Customizing Vouchers – Displaying Vouchers - Altering Vouchers – Pre – defined Vouchers – Purchase Voucher – Sales Voucher – Payment Voucher – Receipt Voucher – Journal Voucher – Contra Voucher – Memo Voucher – Optional Vouchers – Post Dated Vouchers – Entering Accounting Vouchers using As Invoice and Accounting Invoice.

UNIT – III - COST CENTERS AND TAXATION

Cost categories and Cost Centers – Creating Cost Center – Displaying Cost Center – Altering Cost Center – Deleting Cost Center. Accounting Entries relating to Cost Center using all Vouchers.

TAXATION: Setting up off Accounting Features – Inventory Features - Statutory Taxation – VAT – Type of VAT – VAT Rates - Ledger Creation - Selection of VAT Category – Collecting VAT - Voucher Entry- CST – CST Rates - Ledger creation – Settings on CST – Collection of CST – Voucher Entry.

UNIT – IV - INVENTORY INFORMATION:

Stock Group – Creating Single Stock Group - Multiple Stock Group – Displaying Multiple Stock Groups – Altering Multiple Stock Group – Deleting Stock Group- Stock Categories – Displaying Stock Categories – Altering Stock Categories – Deleting Stock Categories - Stock items – Creating Stock items – Displaying Stock item – Altering Stock item – Deleting Stock Items - Unit of Measure – Creating Unit of Measure – Displaying - Altering – Deleting - Accounting Entries using Item Invoice .
Godowns – Creating Godowns – Displaying Godowns – Altering Godowns – Deleting Godowns – Accounting entries – Transfer of Goods from Godown to Godown – Sale of items from Selecting Godowns. Using Item invoice.

UNIT – V - REPORTS:

Generating Reports – Day Book – Restricted to a period – Trial Balance – Profit and Loss Account – Balance Sheet - Purchase Ledger – Sales Ledger - Statement of Accounts – Ledgers – Cash Book – Bank Book – Sundry debtors – Sundry Creditors - Cash Flow Statement – Funds Flow Statement - Stock Summary – Bank Reconciliation Statement.

Reference:

1. Tally Bible By Genesis.
2. Tally by Namrata Agrawal.

**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
030-PRICIPLES OF TALLY
MODEL QUESTION PAPER**

Time : 2 Hours

Max. Marks : 50

PART – A

Answer Two Question from each unit - 10 X 2 = 20

1. How will you create a company?
2. How will you alter a Company?
3. What is mean by “Books Beginning from”?
4. What are the default ledgers available in a company?
5. How will you create a sundry Debtors Ledger?
6. How will you enter the party address in the ledger?
7. What is Cost Center?
8. What is Cost Category?
9. How will you configure to get cost center?
10. What is Stock Group?
11. What is Stock Category?
12. What is my by Unit of Measure?
13. How will you get the Day Book?
14. How will you get the Cash Balance?
15. How will you get the Total Sales ?

PART – B

Answer one question from each Unit. 5 X 6 = 30

16. A. What are the menus in Gate way of Tally, Explain them ?
OR
B. What are the menus in the Display Menu, Explain them?
17. A. What are the Account Books , Explain?
OR
B. What are the Types of Vouchers , Explain?
18. A. Is it Necessary to maintain Cost Center, Explain?
OR
B. How will get the Expenses incurred in particular Cost Center?
19. A. How will you enter Stock Item. Explain?
OR
B. Is it necessary to create Godown? Give your commend.
20. A. How will you list out the Sundry creditors and their Current year transactions?
OR
B. How will you generate the Bank Reconciliation Statement.

* * *

**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
030-PRICIPLES OF TALLY
PRACTICALS**

GROUPS BY DEFAULT

I. CAPITAL ACCOUNT

1. Capital Account
2. Drawings Account

II. PURCHASE ACCOUNT

1. Purchase Account
2. Purchase Return Account

III. SALES ACCOUNT

1. Sales Account
2. Sales Return Account

IV. BANK ACCOUNT

All Bank Accounts

V. CURRENT ASSETS

1. Cash in Hand
2. Cash at Bank
3. Deposits
4. Loans and Advances
5. Opening Stock
6. Closing Stock
7. Sundry Debtors
8. Drawings
9. Investments
10. Bills Receivable
11. Prepaid Expenses
12. Accrued Incomes

VI. CURRENT LIABILITIES

1. Sundry creditors
2. Outstanding Expenses
3. Income received in advance
4. Loans from outsiders
5. Loans from Bank (OD)
6. Loans from Bank (CC)

VII. FIXED ASSETS

1. Land and Building
2. Plant and Machinery
3. Furniture and fixtures
4. Light and Fittings
5. Motor Vehicles
6. Loose Tools
7. Goodwill
8. Patent right
9. Trade Mark

VIII. DIRECT EXPENSES

1. Wages
2. Freight Charges
3. Lightings
4. Carriage inwards
5. Factory Rent
6. Gas, fuel and Water
7. Octroy and duty
8. Factory Electricity
9. Packing Materials purchased

IX. DIRECT INCOME

1. Sale of scrap

X. INDIRECT EXPENSES

1. Salary
2. Electricity
3. Rent
4. Post and Telegraph
5. Stationary
6. Tax
7. Conveyance
8. Advertisement
9. Traveling Expenses
10. Interest paid
11. Insurance A/c
12. Duties and Taxes
13. Auditor Fee
14. Manager Commission
15. Insurance Premium
16. Commission Paid
17. Discount Paid

XI. INDIRECT EXPENSES

1. Carriage outwards
2. Brokerage charges
3. Interest on capital
4. Provision for doubtful A/c
5. Depreciation a/c
6. Interest on Capital a/c

XII. INDIRECT INCOME

1. Discount Received
2. Commission Received
3. Provision for discount on debtors a/c
4. Brokerage Received
5. Interest on Deposits and
6. Interest on Deposits and Investments
7. Interest on drawings
8. Apprenticeship premium received and 9. Rent received

EXERCISE NO. I.

Create a Company in the Name of MAILAI INDUSTRIES LTD, Enter in the proper Voucher, Display all the Ledgers and their Balances.

	Rs.
2001	
April 1. Arul Commenced business with	100000
2. Deposit with Indian Bank	60000
3. Sold Goods to Kannan & co	24500
4. Purchased Goods from Mani & Co	21000
5. Received Cheque from Kannan & Co	20000
6. Issued cheque on account of Mani & Co	16000
8. Sold Goods to Manohar & Co	28600
May. 3. Carriage inward	140
11. Cash sales	12450
14. Cheque received from Manohar & Co	25000
4. Purchased goods from Lakshman & Co.	40000
18. Purchased Stationary	450
June. 5., Carriage outward	150
7.. Post and Telegraph	345
11. Conveyance	650
15. Cash Withdraw from bank	25000
16. wages paid	2350
18. Paid Lakshman & Co. by Cheque	35000
Oct. 8. Electricity Charges	1245
9. Purchased Machinery and paid by cheque	12500
17. Gas and fuel	240
20. Machinery purchased from Manju & Co.	16540
20. Paid cash to Lakshman & Co. for the full settlement of his account	3200
30. Salaries paid	7400
2002	
Jan. 14. Advertisement Expenses	1200
24. Insurance Premium paid	500
25. Drawings by proprietor for his personal use	4500

EXERCISE No. II

The following transactions were done by " My company" for the financial year 1999-2000

As on 1-4-2006 , the opening balances were

Cash Rs. 5,000

SBI Rs. 25,000

The following parties buy from My Company and their balances as on 1-4-99:

VGP	Rs. 45,000
Kiskinta	Rs. 1,54,000
Spencers	Rs. 2,50,000

The following transactions were done for the Financial year 1999 - 2000

April	1	Sold TV to VGP for Rs. 4,50,000
	2	Sold Fridge to STM for Rs. 7,00,000
	3	Sold Audio Sets to Kiskinta for Rs. 50,000
May	2	Received Rs.4,00,000 as cheque No.566778 from VGP and deposited in SBI
	5	Received Rs. 5,00,000 from STM as Cheque
June	4	Sold to Sri & Co. Washing Macine for Rs. 8,50,000
	6	Sold Fridge to ITC for Rs. 25,000
	9	Received from Sri & C0. Rs. 6,50,000 of which Rs. 1,50,000 as cash and balance as cheque , No. 123546
July	5	Sold Air Conditioners to Global for Rs. 3,50,000
	9	Received from Gloabal Rs. 1,50,000 out of which Rs. 50,000 as cash balance as Cheque No. 145646.
Sept.	7	Sold Audio for Rs. 4,00,000 and an TV for Rs. 2,00,000 to Ramesh & Co.
	11	Sold Washing Machine for Rs. 80,000 and Fridge for Rs. 7,500 to TLV
Oct	14	Received from Ramesh & Co. Rs. 2,50,000 as Cheque. No.5466754
	17	Received from Ramesh & Co. Rs. 2,50,000 as Cheque No. 3445567
2007		
Jan	7	Sold to STM Fridge for Rs. 45,000

Try these Questions:

1. What is the outstanding for Ramesh & Co.?
2. What is total sales done upto 31-7-99 ?
3. What is the sales for fridge, Audio and TV ?
4. Is there any Amount pending from VGP ?
5. Can you display all transactions for VGP ?

EXERCISE No. III

Create a company called ACME Pvt. Ltd. for the financial year 1997 - 98

1-4-97	Cash on Hand	Rs.75,000
	SBI	Rs. 1,25,000
	IB	Rsw. 55,000
April	2	Paid to Mr. David towards salary advance for cash Rs. 1000
	5	Paid to Sweeper Rs. 75 as cash
	6	Paid to M/s. Rangaswamy & Co. towards Audit Fee Rs. 5000 from IB Paid to Sekar Rs. 4,500 towards salary from SBI
May	4	Paid Rs. 150 to Jasmine stores towards Stationery Expenses as cash
	7	Received Rs. 4,500 as Cheque towards Commission from GLOBAL

	8	Paid donation Rs. 50 as cash .
	12	Paid tp 1450 towards Electricity Charges for the Month of April from SBI
	17	Received Rs. 50,000 as cash from Mr. Hari (partner) towards loan
	31	Paid Rs. 50 as luch expenses to Mr. Ravi from cash
June	7	Paid to Cars India towards car hire charges for the month of April Rs. 7,500 through Cheque No. 54657, SBI
	9	Paid Rs. 100 as Commission to Ravi as cash towards the order booked by him
	16	Excess amount Rs. 50 paid towards electricity refund received as cash
	20	Paid Rs. 500 as cash to Selvam towards the following:
		Conveyance Rs. 100
		Tea Expenses Rs. 50
		Medical Expenses Rs. 150
		Overtime Chages Balance

1. What is the cash balance ?
2. What is the amount spent for Conveyance and for which date and to whom ?
3. What is the closing balance of cash on 1-4-97 and details needed
4. Total number of payment vouchers for the month of April
5. Is there any Amount paid or Received from Mr. Ravi ?

EXERCISE No. IV

BILL TO BILL MAINTENANCE & USING ACCOUNT INVOICE

Create a company " EVER GREEN" for the financial year 2006-2007

Opening Balance as on 1-4-2006

Stock on hand	Rs. 8,00,000
Bikes	Rs. 5,50,000
Cash	Rs. 8,000
SBI	Rs. 2,50,000
Furnitures	Rs. 3,00,000

The following parties purchased from Ever Green and have not yet paid as on 1-4-97

Olympic Times	Rs. 1,50,000	Bill No. 85
National Times	Rs. 50,000	Bill No. 89
Global Times	Rs. 1,50,000	Bill No. 98

Ever Green purchased from the following Parties:

Titan Ltd.	Rs. 2,50,000	Bill No. T/105
HMT Ltd.	Rs. 1,50,000	Bill No. H/256
Rado Ltd.	Rs. 1,00,000	Bill No. R/888

The following transactions were done for the financial year 97-98

April	1	Purchase from Rado Watches for Rs. 25,000	Bill No. R/777
	5	Purchased from Rado for Rs. 1,25,000	Bill No. R/458
	7	Paid to Sri Rs.. 150 towards Conveyance	
	10	Received Rs. 500 as Rent from Ravi	
	15	Sold Watches Worth for Rs. 5,00,000 to Govt. of India,	Bill No. 74, Credit days 90
	18	Purchased from Titan for Rs. 60,000	Bill No. T/107
	24	Sold to KK Ltd. for Rs. 45,000, Gave him a 10% Discount,	Bill No. 103
	28	Paid to Abbas Rs. 20 from cash for lunch	
May	1	Purchased for Rs. 6,50,000 for Bill No. 11/247 from HMT and paid	
	6	Transportation Charges Rs.. 250 to bring the Watches	
	9	Sold to Global for Rs. 5,00,000	Bill No. 144
	11	Received Rs. 6,00,000 as cheque from Global to be	Bill Nos: 144 and balance for Opening Balance.
	12	Paid to Titan Rs. 30,000 as Cheque for Bill No. T/107	
June	6	Received Rs. 85,000 as cash from Olympic Times as advance	
	7	Paid Rs. 500 as cash to Bala, Conveyance Rs. 100, Lunch Rs. 150, Tea Expenses Rs. 250.	
	Aug. 9	Paid Rs. 500 as the first installment to Sriram Chits.	

EXERCISE No. V
ACCOUNTS WITH VAT

Create a Company in the name of FAST TRAK INDIA LTD, . Enter the transactions in the proper voucher, Take out the Report of Trial Balance, , Profit and Loss Account and Balance Sheet. 2006

April 1. The book of FAST TRAK INDIA LTD. Shows the following Opening Balance.

	Dr.	Rs.		Cr.	Rs.
Opening Stock		25500	Capital		300000
Cash-in-Hand		38700	Chandanlal & Co Bill No. 542		75000
Cash at Indian Bank		274200	Buildcraft India ltd. Bill No. 721		65000
and Building	133000		Loan from bank	240000	
Investments		50000			
Machineries		25400			
Furniture		25700			
Flexo ltd.		45500	Bill No. 556		
Foam India ltd.		62000	Bill No. 445		

2. Bought from Chandanlal & Co Bill No. 781 72500

3. Sold to Flexo ltd. Bill No. 237	75400
5. Cash Sales to Paramveer 5% discount allowed	35750
8. Cheque received from Flexo ltd. Against the Bill Nos. 556, 237	100000
10. Issued Chque on Account of Chandanlal & Co Bill No. 542, 781	100000
12. Cash paid into bank	25000
18. Bought Machineries from Universal India Ltd.	23500
20. Sold to Flexo ltd. Bill No. 627	85000
20. Sold to Foam India ltd. Bill No. 542	72500
21. Cheque issued to Universal India Ltd.	23500
22. Sold to Foam India ltd. Bill No. 543	185000
23. Purchased goods from Chandanlal & Co Bill No. 824	95500
24. Purchased furniture from Godrej & Co.	15500
24. Cheque received from Flexo ltd. Against the Bill No. 627	75000
25. Purchased from Build craft India ltd. Bill No. 482	120000
26. Cheque received from Foam Inida ltd. Against the Bill No. 542	72000
27. Sold to Flexo ltd. Bill No. 628	170000
28. Cheque issued for proprietors personal use	10000
29. Cash withdrawn from Bank for office use	20000
29. Cheque issued to Chandanlal & Co Bill No. 781, 824	75000
30. Cheque issued to Buildcraft India ltd. Bill No. 721 and 482	100000
30. purchased stationeries	12300
30. Rent paid by cheque	2550
30. Salary paid to the Office Staff	17500

Charge VAT 4% on all purchases and sales.

Get the VAT Report for this month, Give a Payment for the Payment of VAT.

Closing Stock as on 30 th April 2007 Rs. 32400

EXERCISE No.VI

MAINTAINING COST CENTER

Create a company called ' Gem International ' for the financial year 2006-2007

Opening Balances

Petty cash	Rs. 5,000/-
Indian bank OD	Rs. 10,000/-
Factory cash	Rs. 7,000/-
Office cash	Rs. 15,000/-
Cycle	Rs. 600/-

Rs.5,500/- to be paid to ABC & CO., for the Bill No.2569 dated 31.03.2006.

Rs.8,500/- is not yet received from Doss Packaging fro Bill No.47 dated 31.03.2006

The following are the braches for Gem International:

- 1. Bombay 2. Delhi 3. Bangalore 4. H.O.**

April 1 Paid to Mr. Ram towards conveyance Rs.50/- from petty cash, spent at Bombay.

5 Paid to Siva towards Tea Expense Rs.10/- from petty cash - Delhi

12 Received from Doss packaging Rs. 10,000/- for bill No.47 and balance as advance.

19 Paid to Ponds Rs. 50,000/- as advance for future purchase, Bill No.:01 From IB

May 2 Sold to GEC for Rs. 1,00,000/- Bill No.: 58, Credit days 45 - H.O.

15 Purchased from Sterlite for Rs. 15,000/- Bill No.:45 with Credit days 30 - Bangalore.

30 Received Rs. 150/- as interest from IB towards FD - Bangalore

June 2 Received the amount paid to Ponds on 02.04.97 as cheque No.: 54545

4 Paid to Mr Kumar for the following by office cash

Salary	Rs. 1,500/-	- H.O
Conveyance	Rs 550/-	- Delhi
Medical	Rs. 850/-	- Bombay
Tea	Rs. 90/-	- Bangalore

12 Sanctioned an loan of Rs. 2,000/- towards Guru's marriage loan

15 Gave Rs. 100/- as donation for Balaji Temply - H.O. from Office cash.

July 5 Received Rs. 50,000/- from GEC. As cash which was accounted in the Office cash for Bill No.: 58

Aug 7 Deposited Rs. 50,000/- in the Indian Bank from office cash

11 Opening an current account with SBI by depositing Rs. 1,5000/-

18 GEC settles his account by paying the balance amount by cheque Which was deposited in SBI.

22 Paid to Indian Airlines for booking Flight Ticket to Bangalore Rs.3,500/- Paid from Office Cash.

Sept. 12 Received Rs. 1,50,000/- as loan from Mr. Sundar(Partner) accounted in Office Cash.

14 Paid Rs. 10,000/- to Mr. Sri from Office cash towards advance for his

Tour to Bombay

- 17 Received Rs. 2,000/- from Mr. Sri towards advance he received for his Bombay tour H.O.
- Nov. 10 Sold to RPG goods worth Rs.75,000/-, Bill No. 632 - Bambay
- 12 Purchased from BBC Traders goods worth Rs.18,000/- Bill No.522 With 45 days credit, Bombay.
- Dec. 6 RPG issued a debit note to us for Rs.10,000/- for Bill. No.: 632
- 21 Received from RPG Rs. 30,000/- for the pending bill as cheque & Deposited in SBI.
- 22 Paid Rent Rs.25,000/- from SBI –
- | | |
|------------------|--------------|
| Delhi branch | -Rs. 5,000/- |
| Bombay | -Rs. 7,500/- |
| Bangalore branch | -Rs 5,000/- |
| Balance for H.O. | |

EXERCISE

SE No. VII

ACCOUNTS WITH INVENTORY

Create a Company in the Name of CYBER ELECTRONICS LTD. Maintain Opening Stock in Inventory system, prepare Item Voucher and Report of P&L Account and Balance sheet for the Year 2006-2007 and take out a print.

Capital	500000
Loans from Bank	50000
Phillips international Bill No. 123	135000
Sony Electronics Bill No. 234	125000
Furniture	12000
Land and Building	120000
Light and Fittings	15000
Machineries	14000
Investments	100000
Rathna House	82000 Bill No. 456
Chellamony & Co.	93000 Bill No. 767
Cash-in-hand	15500
Cash at (Canara Bank)	225500

OPENING STOCK

Stock Group Television
 Stock Category Phillips Television
 Sony Television

Stock Item

	No.	Cost Price Per piece	Sales price per piece
Phillips 21" Colour TV	12	11000	16000
Phillips 24" Colour TV	10	13000	18000
Sony 21" Colour TV	15	12000	16000
Sony 24" Colour TV	13	14000	19000

Set the above price as Standard Cost price and Selling price

Transactions:

Charge 12.5 % VAT on all Purchase and Sales.
 2006

April 2. Bought from Phillips international Bill No. 5544

Phillips 21" Colour TV 15 Nos,
 Phillips 24" Colour TV 12 Nos.,
 Freight Charges on purchase Rs. 2300

2. Purchased from Sony Electronics Bill No. 235

Sony 21" Colour TV 10 Nos.,
 Sony 24" Colour TV 10 Nos.
 Freight Charges on purchase 2450

3. Sold to Chellamony & Co. Bill No. 5435

Phillips 21" Colour TV 6 Nos.
 Phillips 24" Colour TV 5 Nos.
 Sony 21" Colour TV 5 Nos.
 Sony 24" Colour TV 8 Nos.
 Forwarding Charges 4500

4. Sold to Rathna House Bill No. 812

Phillips 21" Colour TV 5 Nos.
 Phillips 24" Colour TV 5 Nos.
 Sony 21" Colour TV 6 Nos.
 Sony 24" Colour TV 6 Nos.
 Forwarding Charges 5200

6 Goods returned to Phillips international from Bill No. 5544

Phillips 21" Colour TV 1 No.

May 8. Cheque received from Rathna House for Settling the Bill No. 456 and
 Balance for the Bill No. 812 – Rs.250000

10. Goods returned by Chellamony & Co. from the Bill No.5435
Phillips 21” Colour TV 1 No.

11. Issued Cheque on Account of Phillips International against the
Bill No. 123 and Balance for the bill No. 5544 Rs.200000

12. Carriage Inward 1240

12. printing and stationeries - 4500

12. Received cheque from Chellamony & Co. for Bill No.767 and5435 Rs. 250000

12. Sold to Rathna & Co. Bill No. 5618

Phillips 21” Colour TV 5 Nos

Phillips 24” Colour TV 6 Nos.

Sony 21” Colour TV 5 Nos.

Sony 24” Colour TV 7 Nos.

15. Cheque received from Rathna House for settling the pending bills
and balance for the Bill No. 5618 Rs. 250000

Aug – 5. Bought from Phillips international Bill No. 892

Phillips 21” Colour TV 20 Nos,

Phillips 24" Colour TV 20 Nos.,

Freight Charges Rs. 2100

2. Purchased from Sony Electronics Bill No. 893

Sony 21" Colour TV 20 Nos.,

Sony 24" Colour TV 20 Nos.

Freight charges Rs. 2240

18. Sold Goods to Vasanth & Co. Bill No. 7723

Phillips 21” Colour TV 5 Nos.

Phillips 24” Colour TV 6 Nos.

Sony 21” Colour TV 5 Nos.

Sony 24” Colour TV 5 Nos.

Forwarding charges 4300

20. Bonus paid to Office Staff Rs. 54000

Sept 22. Cheque received from Vasanth & Co against the
Bill No. 7723 Rs. 250000

29. Sold Goods to Prithvi & Co. Bill No.7654

Phillips 24” Colour TV 5 Nos.

Phillips 21” Colour TV 8 Nos.

Sony 21” Colour TV 6 Nos.,

Sony 24" Colour TV 10 Nos.
Forwarding charges Rs. 3500

30. Cheque issued to Phillips International for pending bills and the balance for the Bill No. 892 Rs. 300000

30. Godown rent paid by cheque Rs. 24000

18. Cheque received from Prithvi & Co. for the Bill No. 7654 Rs. 250000

19. Issued Cheque to Sony Electronics for the pending Bills and the balance for the Bill N. 893 Rs. 300000

Dec. 2. Office Rent paid by cheque Rs. 4500

30. Salary paid to the Office staff. 18000

March 20. Sold Goods to Vasanth & Co. Bill No. 7724

Phillips 21" Colour TV 5 Nos.

Phillips 24" Colour TV 6 Nos.

Sony 21" Colour TV 5 Nos.

Sony 24" Colour TV 5 Nos.

Forwarding charges 4400

18. Received cheque from Vasanth & Co for settling the pending bills and the balance for the Bill No 7734 Rs. 200000

Get the VAT Report for the whole year and make Voucher for the VAT payment

Provide 10 % Depreciation for each Fixed Assets.

EXERCISE No. VIII

MAINTAINING GODOWNS AND INVENTORY MAINTENANCE

Create a Company TLV House for the Financial Year 2007-2008

Opening Balance as on 1-4-2007

Car	Rs. 1,50,000
Furniture	Rs. 80,000
Fans	Rs. 15,000
Cash	Rs. 11,000
SBI	Rs. 8,55,000
IB	Rs. 45,000

Sundry Debtors

<u>Party Name</u>	<u>Amount</u>	<u>Bill No.</u>
Kiskinta	Rs. 75,000	Bill No. 4789

Celebrity	Rs. 2,500	Bill No. 487	
Kamal & Co.	Rs. 10,500	Bill No. 4788	
	Sri,s Capital		Rs. 10,00,000
	Kumar,s Capital		Rs. 7.50,000
	Loans		Rs. 50,000

<u>Party Name</u>	<u>Amount</u>	<u>Bill No.</u>	<u>Bill Amount</u>
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Sundry Creditors

Teja Industries	Rs. 3,50,000	755	Rs. 1,50,000
		898	Rs. 50,000
		878	Rs. 1,50,000
Samyuktha Foundations	Rs. 2,50,000	589	Rs. 1,00,000
		459	Rs. 50,000
		001	Rs. 1,00,000
Trade Connections	Rs. 7,00,000	444	Rs. 1,75,000
		863	Rs. 25,000
		212	Rs. 5,00,000

Create Two Godowns Luz & Parrys and allocate the items equally

Opening Stock Balance:

Vimal Sarees	500	pcs	@	Rs. 450
Vipul Sarees	1,500	pcs	@	Rs. 400
Xxx Churidars	100	Nos	@	Rs. 150
Aarani Silk Sarees	2500	pcs	@	Rs. 2,500
Peter England Shiirts 40 Cm.	1500	Nos	@	Rs. 500
Zero Shirts 40 Cm.	450	Nos.	@	Rs. 350
Peter England 42 Cm.	540	Nos.	@	Rs. 550
Cassidys Shirts 40 Cm.	800	Nos.	@	Rs. 300
Cassidys Shirts 43 Cm.	880	Nos.	@	Rs. 325
New Port Jeans	1000	pcs.	@	Rs. 800
Ruf & Tuf Jeans	888	pcs.	@	Rs. 700

Hero Shirts 42 Cm.	52	pcs. @	Rs. 250
Gents Kerchief	1026	Nos. .@	Rs. 1.50
Ladies Kerchief	250	Nos. @	Rs. 2.50
Leather Belt - Black	450	Nos. @	Rs. 25
Leather Belt - Coloured	458	Nos. @	Rs. 40
Delta T Shirts 40 Cm.	106	Nos. @	Rs. 250
Reebok Shoes	4588	pairs @	Rs. 200
Nike Shoes	430	pairs @	Rs. 400
KK Shoes	254	pairs @	Rs. 450
Cotton Dothi	150	Nos. @	Rs. 150
Mill Dothi	500	Nos. @	Rs. 100
Kanchi Silk 8 Yards Saress	148	pcs @	Rs. 3500
White Socks - Cotton	148	pairs @	Rs. 15
Coloured Socks - Cotton	666	pairs @	Rs. 19

Transactions

**Enter the Transactions Using Item Invoice ,
Charge 4% VAT on all Purchase and Sales**

- 05-04-07 Purchased the following from Teja Industries
Kanchi Silk Sarees - 150 pcs Luz - 80, Parrys - 70 @ Rs. 2000/ pcs.
Xxx Churidars - 450 Nos. Luz - 150, Parrys - 300 @ Rs. 150. / No.
Vipul Sarees - 500 pcs. - Luz - 300, Parrys - 200 @ Rs. 400/pcs.
Bill No.: 7585, 45 days credit.
- 10-04-07 Paid Rs. 750 as Rent to Mr. Murugan
- 17-05-07 Sold the following to M/s Nalli Silks
Kanchi Silk 8 yards Sarees - Nos.. Luz - 50, Parrys - 50 @ Rs. 5500/pcs
Vipul Sarees - 500 pcs. Luz - 250, Parrys - 250 @ Rs. 500/pcs.
Xxx Churidars - 650 Nos. Luz - 300 , parrys - 350, @ Rs. 350/Nos.
Bill No.: 1000 ,
- 17-5-07 Received Rs. 10,500 as cash from M/s Kamal & Co.
to be adjusted for Bill No. 4788
- 22-05-07 Paid Rs. 3,50,000 from Indian Bank to Trade Connections to adjusted for Opening
Balance

30-05-07 Sanctioned a Loan of Rs. 15,000 from State Bank to Mr. Kannan, Manager

07-06-07 Purchased the following from M/s, Lakshmi Narayan & Co.,
 Cassidy's Shirts 40 Cm. - 220 Nos., Luz - 100, Parrys - 120 @ Rs. 100/Nos
 Aarani Silk Sarees - 1050 Nos. Luz. - 600, Parrys - 450 @ Rs. 1000/Nos.
 Peter England Shirts 42 Cm.-2500 Nos. Luz-1500, Parrys-Balance
 @ Rs.350/No., Bill No. 9999.

11-07-07 Sold the following to M/s. Pinky & Co.
 Ruf & Tuf, 777 Nos. Luz - 300, Parrys - 477 @ Rs. 1500/ Nos.
 Peter England 42 Cms - 2000, Luz - 1000, Parrys - 1000 @ Rs. 600/Nos.
 Cassidy's 42 Cms.- 100 Nos. Luz - 74, Parrys - 26 @ Rs.550/No.
 Bill No. 299,

22-7-07 Paid Rs. 500 as Insurance for Vehicle from Cash

23-7-07 Received Rs. 2,00,000 as Cheque from Nalli Silks towards Bill No.1000 and deposited in
 Indian Bank.

26-07-07 Paid Rs. 1,00,000 to Lakshminarayan & Co. towards Bill No.9999 from SBI

6-08-07 Purchased the following from Chevro Fashions:
 Reebok Shoes 1500 pairs, Luz - 1000, Parrys - 500 @ Rs. 250/ pair
 Nike Shoes 5000 pairs, Luz - 2500, Parrys - 2500 @ Rs. 300/ pair
 Cotton Socks - White - 750 pairs, Luz - 300, parrys - 450 @ Rs. 10/ pair
 Bill No. 528, Credit days - 60 days.

13-8-07 Purchased the following from KK Shoes
 KK Shoes 500 pairs, Luz - 200, Parrys - 300 @ Rs. 450/pair
 Leather Belt -Black-700, Luz-200, Parrys-500 @ Rs.40/No. Bill No. KK101

17-08-07 Received Rs. 150/- towards the sale of old books

2-09-07 Sold the following to M/s. Sri & Sri
 KK Shoes 300 pairs, Luz - 100, Parrys - 200 @ Rs.700/pair
 Leather Belt - colour -1000, Luz - 50, Parrys - 50 @ Rs. 50/No.
 Bill No. 244.

13-09-07 Received Rs.12,00,000 from Kamal & Co. for previous year bill as cheque deposited in
 Indian Bank

17-10-07 KK shoes wanted to settle his account fully. His account was settled by cheque from
 Indian Bank

- 22-10-07 Paid Rs. 50 from cash as fine to the Government for violating Traffic rules
- 27-11-07 Received Rs. 15000 as Cash as incentive from Chevro Fashions for Sales done for the month of August
- 3-11-07 Find the outstanding amount pending from Sri & Sri and put an entry as if you have received 50% of the amount from the parties as cheque adjust the bills as you prefer
- 05-12-07 Paid Rs. 3,50,000 as salary fro Indian Bank to all Staff Members
- 05-01-08 Deposited Cash Rs. 1000 to the Hundi of Lord Balaji.

EXERCISE No. IX

Create a Company in the Name of GREAT INDIA LTD, Enter the Stock item properly, prepare the Report of Trading and Profit and Loss Account and Balance Sheet for the year 2006 -2007

The Company maintains Chennai and Madurai Godowns

Units of Measure : Numbers.

Set the Cost price and Selling price as Standard Rate

Create Necessary Group and Category

Opening Balance

Interior						
	Std.Rate	Chennai	Madurai	Quantity	Value	Retail Price
Hylam						
9mm - WP	950	3	7	10	9500	1200
12mm - WP	1000	5	10	15	15000	1300
18mm - WP	1100	10	10	20	22000	1400
24mm - WP	1200	5	5	10	12000	1500
Decolam						
9mm - NWP	1000	10	10	20	20000	1100
12mm - NWP	1100	10	10	20	22000	1200
18mm - NWP	1200	5	15	20	24000	1400
24mm - NWP	1300	15	5	20	26000	1500
Exterior						
Hylam						
10mm -WP	1500	10	10	20	30000	2000
14mm -WP	1700	15	15	30	51000	2300
16mm -WP	2000	10	10	20	40000	2500
22mm -WP	2500	10	10	20	50000	3000

Decolam						
10mm - NWP	2000	15	15	30	60000	2500
14mm - NWP	2200	10	10	20	44000	2800
16mm - NWP	2400	5	15	20	48000	3000
26 mm - NWP	2600	10	20	30	78000	3200
Total					551500	

Opening Balance

Cash A/c	74,500	Capital A/c	Rs.10,00,000
Indian Bank A/c	4,57,500	Loan from Bank (Indian Bank)	Rs. 2,00,000
Furniture A/c	14,000	Visaka Ltd. Bill No. 111	Rs. 1,25,600
Land and Building A/c	1,20,000	Loan from Govt.	Rs. 50,000
Light and Fittings A/c	7,600		
Machinery A/c	45,500		
Investments A/c	50,000		
Loans and Advances A/c	,50,000		
Flexo Ltd Bill No. 222	76,000		

Transactions:

Assume that all transactions are Interstate Transactions.

Charge CST 2% on all Purchase and Sales.

- 1-4-06 Purchases from Visaka Ltd. . Bill No. 234, Credit Days - 30 Days
- 12mm-WP : Chennai - 12, Nos. Madurai - 20 Nos
- 12mm NWP Chennai - 15, Nos. Madurai - 10 Nos
- 16mm WP Chennai - 10 Nos. Madurai - 10 Nos
- 24mm NWP Chennai - 10. Nos. Madurai - 15 Nos.
- Freight charges Rs. 6200
- 20-4-06 Sold to Flexo Ltd.. . Bill No. 333, Credit Days - 30 Days
- 18 mm- WP : Chennai - 10, Nos. Madurai - 10 Nos
- 18 mm NWP Chennai - 25, Nos. Madurai - 10 Nos
- 16 mm WP Chennai - 10 Nos. Madurai - 10 Nos
- 24 mm NWP Chennai - 10 Nos. Madurai - 15 Nos.
- Forwarding charges Rs. 3450
- 26-5-06 Returned goods by Flexo Ltd. 24mm NWP 2 Nos., Chennai Godown
- 1-6-06 Purchased from Visaka Ltd. Bill No. 444, Credit Days - 45 Days
- 9 mm WP : Chennai - 12, Nos. Madurai - 20 Nos
- 12 mm NWP Chennai - 15, Nos. Madurai - 10 Nos
- 16 mm WP Chennai - 15 Nos. Madurai - 10 Nos

24 mm NWP Chennai - 10. Nos. Madurai - 15 Nos.
 Freight Charges Rs. 2100

2-6-06 Cheque received from Flexo Ltd. Rs. 1,50,000 for the payment of the Bill
 No.222, Balance for the Bill No. 333., Cheque No. 243564

01-07-06 Returned goods to Visaka Ltd 24mm NWP 2 Nos., Against the bill No. 444 Chennai
 Godown

30-07-06 Paid Salary Rs. 4500 to the Office Staff

2-8-06 Cheque issued to Visaka Ltd. for an amount of Rs. 300000 for the
 Bill No.. 111 and balance for the Bill No. 234, Cheque No. 345986

5.8-06 Purchase Stationery Rs.210

2-1-07 Sold to Lloyds Pvt. Ltd. Bill No. 545, Credit Days - 45 Days
 18 mm WP : Chennai - 15, Nos Madurai - 10 Nos
 14 mm NWP : Chennai - 15, Nos. Madurai - 10 Nos
 24 mm WP : Chennai - 20 Nos. Madurai - 10 Nos
 26 mm NWP : Chennai - 15. Nos. Madurai - 10 Nos.
 Forwarding Charges Rs. 2130
 Issued Cheque to Visaka Ltd. Rs.200000 for pending Bill of 234
 and Balance for the bill No. 444.

5-2-07 Purchased from Acer ltd. Bill No. 762 credit days 30 Days
 24 mm WP : Chennai - 15, Nos Madurai - 10 Nos
 24 mm NWP : Chennai - 15, Nos. Madurai - 10 Nos
 22 mm WP : Chennai - 20 Nos. Madurai - 10 Nos
 26 mm NWP : Chennai - 15. Nos. Madurai - 10 Nos.
 Forwarding charges Rs. 2150

8-2-07 Cheque Received from Lloyds Ltd . Rs. 200000
 Bill No. 545 Cheque No. 765478

25-2-07 Sold to HCL Computers Ltd. Bill No. 912 Credit days 30 days
 24 mm WP : Chennai - 10, Nos Madurai - 10 Nos
 24 mm NWP : Chennai - 10, Nos. Madurai - 10 Nos
 22 mm WP : Chennai - 20 Nos. Madurai - 10 Nos
 26 mm NWP : Chennai - 10. Nos. Madurai - 10 Nos.
 Forwarding Charges Rs. 1560.

26-2-07	Issued cheque to Acer Ltd Rs. 150000 Bill No.762 Cheque No. 234763
28-2-07	Received Cheque from HCL Computers Ltd. Against the Bill No. 912 Rs. 200000 , Cheque No. 342165
31- 3- 07	Audit Fee paid Rs. 2500
31- 3-07	Salary paid Rs.15000, Rent paid Rs. 4500 , Electricity Charges paid Rs.2350

EXERCISE No. X

MEENAKSHI AMMAN TRUST “ OXFORD SENIOR SECONDARY SCHOOL”

Prepare Income and Expenditure Account The School has the following Opening Balance in the books and Accounts in on 1st April 2000.

Land and Building	17050000	Capital	21737550
Furniture and Fittings	9565000	Loan from Indian bank	10000000
Books and Notes	24750		
Lab Equipments	112000		
Stationeries	32500		
Computer and Accessories	1274800		
Sports Materials	123550		
Chemicals	21450		
Bus	3246000		
Cash in Hand	12650		
Cash at Canara Bank	274850		

Transactions:

June	1. Tuition Fee collected in Cash	754700
	2. Donations received by cheque	5000000
	2. Cash deposited into Bank	250000
	2. Building Maintenance fee collected in Cash	750000
	2. Library fee collected in Cash	155000
	2. Tuition Fee Collected in Cash	1400000
	3. Cash collected for Books and Notes	215600
	3. Cash deposited into Bank	1550000
	3. Cash Collected for Uniform	265700
	4. Donations Collected by cheque	4000000
	4. Cash deposited into Bank	260000
	5. Sports fee Collected in Cash	215000
	5. Tuition Fee Collected in Cash	1074000
	6. Cash deposited into Bank	1285000
	7. Books and Notes purchased and paid by Cheque No. 324765	120500
	8. Purchase of Uniform and paid by Cheque No. 324766	115000
	9. Chemicals purchased and paid by Cheque No.324767	2790
	10. Sports Materials purchased and paid by Cheque No.324768	54200
	11. Purchase of Library Books and paid by Cheque No.324769	55760
	12. Visual Aids Purchased and paid by Cheque No. 324770	46750
	13. Building Maintenance Expenses	26575
	15. Stationeries purchased	16570

20. Office Expenses	450
22. Refreshment Expenses	1875
25. Conveyance Expenses	2450
29. Cash withdrawn from Bank	500000
30. Salary paid	450000
30. Electricity Charges paid	5450

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DEPARTMENT OF TECHNICAL EDUCATION

ADD-ON TECHNICAL COURSE 031-PUBLIC RELATION MANAGEMENT

Duration : 6 Months **Hours : 2 Hours per day**
Classes : Two days per week **Total Hours : 96**

UNIT –I:THE MEANING AND DEVELOPMENT OF PUBLIC RELATIONS:

Definitions of PR. PR's relationship with other functions/professions (advertising, marketing,etc). History and development of PR in Ireland and globally. Professional and industry bodies(PRII, PRCA, CIPR etc).

Ethical : The principal ethical codes which underpin the practice of PR.

UNIT – II: PR AS A MANAGEMENT FUNCTION:

PR's role in the organisation: Counselling the organisation; underpinning the business plan;Relating with publics; communicating performance. The role of the PR practitioner (both inhouse and in consultancies) at strategic and operational level.

UNIT- III :THE PUBLIC RELATIONS PLANNING PROCESS:

Six point planning - situation analysis/research, objective setting, target publics, techniques,budgets, evaluation. The theory in practice via award-winning example case studies.

UNIT – IV:TOOLS AND TECHNIQUES:

The basic tools and techniques available to PR professionals. Event management such as exhibitions, conferences and product launches, etc. Controlled media such as newsletters, brochures, video, websites, electronic press kit (EPK), disc, film etc. Uncontrolled media, i.e. publicity in terms of print, photography, broadcast and internet. The role of the press officer.

UNIT – V:INTERVIEWS:

Print, radio and television interviews. Interview techniques, preparation, scripts, sound bites, keeping control, live or recorded, phone or in-person, statements etc.Entrepreneurship in PR Starting your own PR business, identifying gaps in the market and developing services to fill them. PRII services. Registration of business, VAT, location, insurance, industry contactlistings, advertising, accounts, budgeting, meeting deadlines, credit terms, invoicing/payments etc.

REFERENCE BOOKS:

1. Cutlip, S., Center, A., and Broom, G. (2000). Effective Public Relations. Eighth Edition. Upper Saddle River: Prentice Hall.
- 2 Gunning, E. (2003). Public Relations: A Practical Approach. Dublin: Gill & Macmillan.
Suggested additional reading
3. Beard, M. (1997). Running a Public Relations Department. London: Kogan Page.
- 4 Carty, F.X. (1992). Farewell to Hype. Dublin: Able Press.
- 5.Carty, F.X. (ed) (1995). From John Paul to Saint Jack. Dublin: Able Press.
6. Gregory, A. (2000). Planning and Managing Public Relations Campaigns. London: Kogan Page.
7. Gunning, E. (2003). Public Relations: A Practical Approach. Dublin: Gill & Macmillan.
8. Treadwell, D. and Treadwell, J. (2005). Public Relations Writing: Principles in Practice. Second Edition. London: Sage.

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
031-PUBLIC RELATION MANAGEMENT
Model Questions

Time: 3 Hours

Marks: 100

PART – A

(4 X 10 = 40 marks)

(Answer any TEN questions, all questions carry equal marks)

1. Define the term public relation.
2. Explain the History of public relation.
3. Explain ethical code of public relation.
4. Explain the role of public relation in the organization.
5. Explain the role of public relation practitioner at strategic level.
6. Explain the term communicating performance.
7. Explain the term situation analysis.
8. What do you mean by target publics?
9. What do you mean by evaluation?
10. What do you mean by event management?
11. What do you mean by controlled media?
12. Explain the role of press officer.
13. Explain the term interview.
14. What are the steps to followed for preparing script?
15. How do you conduct telephone interviews?

PART – B

(12 X 5 = 60 marks)

(Answer ALL questions)

16. Explain the relations between public relation and advertisement.

(OR)

What are professional and industrial bodies available for the development of public relations in India?

17. Explain the management functions of public relationship officer.

(OR)

Explain the role of public relation officers at operational level.

18. Explain the steps followed for planning process.

(OR)

Explain the theory in practice in planning.

19. What are the basic tools and techniques available to public relation professions?

(OR)

What are the uncontrolled media available in India?

20. What are the interview techniques followed in India?

(OR)

What are do's and don'ts of telephone interview?

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
032-SALESMANSHIP

Duration	: 6 Months	Hours : 2 Hours per day
Classes	: Two days per week	Total Hours : 96

UNIT – I Origin of Salesmanship

Definition, Nature, Origin, Salesmanship as a career, Importance of personal selling, Types of Salesman including Traveling Salesman and Counter Salesman

UNIT – II Organization of Sales Department

Knowledge of Product - (a) Goods Meaning Nature, (b) Classification and features of products (c) Importance of complete product knowledge (d) Major areas of product knowledge i.e. Manufacturer User, Price, Life etc.(e) Sources of Product information. (f) Sales organizations structure and functions of Sales Manager.

UNIT –III Commercial Organization

Knowledge of organizations :- (a) Definition, Meaning, Nature, Importance of Organization (b) Types of Business Organisations (i) Sole Proprietorship (ii) Partnership (iii) Co-operative Societies (iv) Private companies(v) Joint Stock Companies

UNIT -IV Customer

Knowledge of Customer, Definition, Importance, Source of getting knowledge about customer, Classification of buyer, Ultimate consumer Industrial buyers and Institutional buyers, Government etc. Buying Motives : rational and emotional factors of influencing purchase of a product Analysis of consumer consideration of sex, age, income etc; Finding out customer or identifying customer; Major needs and problems

UNIT – V Sales Process

Sales talk and presentation-Planning, Presentation and various steps in presentation, Overcoming objections, Different types of objections and their ranking, Closing the sales after sales service.

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
032-SALESMANSHIP
Model Questions

Time: 2 Hours

Marks: 50

PART – A (2 X 10 = 20 marks)
(Answer any TEN questions)

1. Define salesmanship.
2. Write short notes on industrial salesman?
3. Salesmanship is persuasion – Explain?
4. What is consumer goods?
5. Give any two examples for the sources of product information?
6. Give any three functions of a sales manager?
7. What is sole proprietorship?
8. What is private limited company?
9. Write short notes on co-operative societies?
10. Write short notes on argumentative type of customer?
11. Who is a sarcastic customer?
12. Give any three problems of identifying customers?
13. Give the different stages of sales process?
14. What is sales resistance?
15. Give any three methods of meeting objections?

PART – B (6 X 5 = 30 marks)
(Answer ALL questions)

16. Explain the origin of salesmanship.
(OR)
Explain the different types of salesman.
17. Explain the functions of a salesman.
(OR)
What are goods? Explain the different types of goods.
18. State the differences between Partnership firm and Joint Stock Company?
(OR)
Explain the features of an organization.
19. Who is called as customer? Differentiate the customer with buyer?
(OR)
Explain the factors influencing buying motives?
20. Discuss fully the selling steps leading to the close of sales.
(OR)
What are objections? Can all objections be answered? Illustrate your answer with suitable example?

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DEPARTMENT OF TECHNICAL EDUCATION

ADD-ON TECHNICAL COURSE 032-SALESMANSHIP

PRACTICALS

1. Interviews of Salesmen such as counter salesman, traveling salesman etc. and different types of salesman, Traveling salesman's reports.
2.
 - (1) Visits to consumer goods manufacturing industries shops
 - (2) Industrial goods manufacturing industries / shops
 - (3) Service organizations, agencies (STD Shops, counter companies, traveling agents, consultants)
3. Visits to different commercial organizations: Sole Trading, Partnership, Co-Operative societies, Joint Stock Companies
4.
 - (A) Interviews with-
 - (i) Consumers
 - (ii) Industrial goods consumers
 - (iii) Service man
 - (B) Visits to trade fairs, exhibitions, sales in your town to observe the customer buying process
5.
 - (a) Collection of Sales Literature
 - (b) Demonstration of sales and presentation
 - (c) Door to Door selling under production, practical training centre (P.T.C.) in your institution
 - (d) Counter selling in some small shops for a week, on the job training (O.J.T.)

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
033-SECRETARY SHIP
Model Questions

Time: 2 Hours

Marks: 50

PART – A
(Answer any TEN questions) **(2 X 10 = 20 marks)**

1. What is an office?
2. Define office organization?
3. Office Layout - Explain?
4. What is continuous stationery ?
5. State the types of papers?
6. What do you mean by duplicating?
7. What are the secretarial duties in an office?
8. Explain noting and drafting?
9. What are the secretarial duties in accounting work?
10. What are the types of reservation?
11. Write short notes on travel insurance?
12. What are the necessary formalities for making travel arrangements?
13. What do you mean by office correspondence?
14. Explain dummy letters?
15. What do you mean by quotation?

PART – B **(6 X 5 = 30 marks)**
(Answer ALL questions)

16. What are the advantages and disadvantages of centralization of an office services?

(OR)

What do you mean by line organization? Discuss its merits and demerits.

17. Define office forms. Briefly explain its advantages.

(OR)

Discuss photocopying and its usefulness in the office.

18. Explain the nature and scope of secretarial duties.

(OR)

Write a short note on receptionist duties?

19. What are the points kept in mind before making travel arrangements?

(OR)

What are the steps to be taken for foreign travel arrangements?

20. What are the points to be kept in mind before drafting a business letter?

(OR)

State and Explain essentials qualities of a good business letter?

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033-SECRETARY SHIP

PRACTICALS

NOTE : The Practical Should be as neat, as the actual work performed in an office.

- ❖ Operation of duplicating machine (manual and electric) : Knowing the stencil, cutting with the help of stylus, knowing the duplicator, re-running used stencils, draw, write and rule on stencil paper, correction of mistakes, mimeography of a Four page folder, maintenance of the Machine
- ❖ Working in the office: Stationery department, maintenance of registers Such as attendance pay provident fund, loans and advances, diary, issue and stock registers.
- ❖ Practice of Secretarial Duties: Noting on official papers, doing receptionist work, meeting callers, checking invoices and bills, duties involving accounting work.
- ❖ Making Travel Arrangement Preparing WM Programme, railway and air reservation, booking hotel accommodation, filling forms for tour advance preparation and submission of T.A. bills.
- ❖ Drafting of the following (on the basis of given information)
 - Application for a job
 - Interview Letter
 - Letter indicating appointment
 - Sales Letter
 - Letter for making a purchase
 - Inquiry letter in relation to purchase of goods
 - Letters with clients/Customers
 - Letters to be written to a bank
 - Letters with suppliers of goods
 - Office notes
 - Office orders

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

034 – SERVICING OF AUDIO AND VIDEO EQUIPMENT

Duration : 12 Months
Classes : Two days per week

Hours : 2 Hours per day
Total Hours : 192

THEORY (72 Hours)

Unit I: Introduction to Electronic Components

Hrs :8

Components Introduction: Resistor, capacitor, inductor, diode, SCR,UJT, FET characteristics Circuits
Introduction: Rectifiers- Regulators – Regulator ICs

Unit II : Servicing of Audio Equipments

Hrs :20

Audio Frequency range – AF amplifier –Types of Speakers – LF woofer – Medium frequency Speakers,
High frequency speakers – High frequency tweeters – Types of Microphone: Carbon microphone-
condenser microphone

Unit III: Measuring and Display Instruments

Hrs :12

Oscillators: Sine wave Oscillator, Meters: Ammeter – Voltmeter – multi meter – Cathode Ray
Oscilloscope

Unit IV : Television Fundamentals:

Hrs :12

Introduction to Television Fundamentals- Block Diagram of color Television receiver and Black & white
Receiver

Unit V : Servicing of Video Equipments

Hrs :20

DTH Principle, - Installation Procedure – Satellite receiver – Introduction to video cameras – Principle of
LCD Projectors – CCD Devices – image sensors

References

1. Principals of Electronics by V. K. Mehta
2. Monochrome & Color Television by R.R.Gulati

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
034- SERVICING OF AUDIO & VIDEO EQUIPMENTS
MODEL QUESTION PAPER

Time: 2 Hrs

MAX. Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions: All Question carry Equal Marks

1. Write the types of capacitor?
2. What are the conditions required for turning off the SCR?
3. Give the applications of UJT?
4. Mention the types of speakers?
5. What is the audio frequency range?
6. Differentiate condenser microphone and carbon microphone?
7. Mention the types of oscillators?
8. What is the purpose of multimeter?
9. Write the differences between multimeter and voltmeter?
10. How many numbers of frames are taken per second while scanning?
11. What is compatibility?
12. What are the primary colours in colour television?
13. State the principle behind LCD projectors?
14. What is DTH?
15. What are the applications of image sensors?

PART – B (5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

1. (A) How UJT is used as relaxation oscillator?
(Or)
(B) Explain the operation of regulator 725?
2. (A) Explain the operation of AF amplifier with a neat diagram?
(Or)
(B) Give short notes of high frequency speakers?
3. (A) Explain briefly about cathode ray tube?
(Or)
(B) Draw the equivalent diagram of ammeter and explain?
4. (A) Draw the block diagram of colour television?
(Or)
(B) What is picture tube and explain its types?
5. (A) How a satellite receives signal? Draw a neat labeled diagram for satellite receiver?
(Or)
(B) Write short notes on image sensors?

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

**034- SERVICING OF AUDIO & VIDEO EQUIPMENT
PRACTICAL (120 Hours)**

List of Experiments

Audio Equipment:

1. Repair of Audio Oscillator
2. Servicing of Radio Receiver
3. Repair of MP3 Player
4. Repair of CD Player
5. Repair of DVD player
6. Servicing of Mikes
7. Servicing of Ordinary amplifiers
8. Servicing of Home Theatre Amplifier
9. Servicing of DTS amplifier
10. Servicing of Stereo amplifier

Video Equipment:

1. Study of Black & White TV Receiver
2. Servicing of Black & White TV Receiver
3. Study of Color TV Receiver
4. Servicing of Color TV Receiver
5. Servicing of DTH antennas
6. Servicing of Satellite Receiver
7. Study of Video cameras
8. Servicing of Video cameras
9. Study of LCD Projector
10. Servicing of LCD Projector.

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

035 - SERVICING OF DOMESTIC APPLIANCES

Duration : 6 Months
Classes : Two days per week

Hours : 2 Hours per day
Total Hours : 96

THEORY (30 Hours)

Unit I : **Hrs: 6**

Tube lights Types, Rating and Specifications of: Tube lights , Electric Fan: Types, Parts and Dismantling of fans – Troubleshooting and reassembling – Servicing of Eliminator(Power Supply), Electric Calling Bell

Unit II : **Hrs: 6**

Iron Box : Types: Non Automatic and Automatic iron box -- Trouble – Faults- Remedy, Wet Grinder: Types -Conventional wet Grinder- Table top Wet grinder–Trouble – Fault – Remedy, Mixie – Trouble , fault and remedy

Unit III: **Hrs: 6**

Motors : Single phase and three phase - Construction , Identification of parts and their functions – ratings – terminal identifications – connections – Trouble shooting Starter : types and troubleshooting – Stabilizer: trouble shooting

Unit IV: **Hrs: 6**

Repairing & maintenance of Heaters, Hotplates, Toasters, Ovens & Micro-Wave Ovens, Geysers, etc.

Unit V: **Hrs: 6**

Servicing and customer care of compressors, refrigerators & controlling devices. Servicing and customer care of washing machine, its inspection - Installation & servicing of Water Coolers & Air Conditioners.

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

035 - SERVICING OF DOMESTIC APPLIANCES

MODEL QUESTION PAPER

Time: 2 Hrs

MAX. Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions: All Question carry Equal Marks

1. List out the different types of tube lights.
2. Write down the parts of an electric fan.
3. What is meant by troubleshooting?
4. How do you identify the faults in grinder?
5. Differentiate automatic and non-automatic iron box.
6. List out the different types of wet grinders.
7. Differentiate single phase and three phase connection.
8. Write down the principle of motor.
9. How do you troubleshoot stabilizer?
10. What are the steps for repairing heaters?
11. Write short notes on maintenance of toasters
12. Write short notes on maintenance of Hotplates.
13. Write the working principle of washing machine
14. Write short notes on servicing of compressor.
15. Discuss about Air conditioners.

PART – B (5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question

1. (A). Explain the servicing of Eliminator.
(Or)
(B). What are the different types of electric fan and explain any one.
2. (A). Explain the principle and operation of table top wet grinder.
(Or)
(B). Explain the construction of conventional wet grinder.
3. (A). Explain about construction of single phase motor
(Or)
(B). Discuss about starter.
4. (A). Explain the operation of Microwave Oven.
(Or)
(B). Discuss about repairing of heaters.
5. (A). Write in detail about the refrigerators.
(Or)
(B). How do you install and service the Water Coolers?

**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

035 - SERVICING OF DOMESTIC APPLIANCES

PRACTICAL (66 Hours)

Identify the trouble and fault and perform the remedial action for the following Domestic appliances

1. Tube light
2. Electric Fan
3. Electric Water Heater
4. Iron Box
5. Wet Grinder
6. Mixie
7. Motor
8. Stabilizer
9. Starter
10. Electric Calling Bell
11. Eliminator(Power Supply)
12. Toasters
13. Refrigerators
14. Washing Machine
15. Water Coolers
16. Air conditioners
17. Geysers.

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UNIT –IV : Dyeing of cellulose fibre –II**12 Hrs**

Reactive dyes – Classification – Properties – Mechanism of dyeing-. Application methods – Exhaust dyeing, sodium silicate pad –batch method-Continuous methods. Latest reactive dyes Vat dyes – Classification- Properties-- Application methods like Leuco vat process.

UNIT –V : Dyeing of Other fibres**12 Hrs**

Dyeing of silk with reactive dyes, acid and metal complex dyes -dyeing of wool with acid &metal complex dyes-dyeing of polyester with disperse dyes using HTHP dyeing method-Dyeing of nylon with acid dyes-Dyeing of polyester /cotton blended fabric using disperse / reactive dyes.

Finishing process

Classification of finishes-Advantages of finishing – finishing of cotton fabric with combined finishing agents. Anticrease finish -Sanforizing (Pre-Shrinkage) - working of stenter machine-Fastness testing for washing, rubbing and light – testing for shrinkage and GSM .

References:

Author	Title	Publisher	Year
Marsh.J.T	Introduction to Textile Bleaching	BI Publications, Janapath Delhi-1	1979
Trotman. E.R	Textiles Scouring & Bleaching	Charless Griffins, Com. Ltd. London	1968
A.Edwinsunder	Chemical preparation of Textiles for colouration	SSM ITT & PC, Co-op store	2005
Shenai.V.A	Technology of Bleaching & Mercerising	Sevak Publications, Wadala, Mumbai-31	
Prayag R.S	The bleaching and dyeing of cotton material	Weaver’s Service Cent., 15A, Mamparamanand Marg, Near Roxy Cinema, Bombay 400004	1983
John shore	Cellulosic dyeing	SDC Publications, UK	
Datye KV and Vaidhay A.A	Chemical processing of Synthetic Fibres and blends	John Wiley & Sons, New York.	1982

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
036 – TEXTILE DYEING

MODEL QUESTION PAPER

Exam Duration : 2 Hours.

Maximum Marks: 50

PART – A

10 X 2 = 20marks

Answer any Ten Questions. All questions carry equal Marks

1. Define Textile Fibre.
2. Define Denier.
3. Give the objects of desizing.
4. Mention the objects of mercerization.
5. State the purpose of bleaching a cotton fabric.
6. Classify bleaching agents. Give examples.
7. What are secondary colours?
8. What do you mean by 100% expression?
9. Mention any two properties of naphthols.
10. What are reactive dyes?
11. What is the function of salt in reactive dyeing.
12. Why are Vat dyes so called?
13. Name the classes of dyes that can be applied to silk.
14. What is HT / HP dyeing method?
15. Mention the objectives of finishing.

PART – B

(5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (a) or sub-division (b) of each question.

1. a. Explain the sequence of processes involved in textile processing of cotton fabrics.

(Or)

- b. How will you desize cotton fabrics by pad-batch method.

2. a. What is the object of bleaching? Give the classification of various bleaching agents with their merits and demerits.

(Or)

b. Explain the process of bleaching with H_2O_2 using J-box.

3. a. Why after treatments are necessary for direct dyed materials? Explain any three after treatments given to them.

(Or)

b. Explain the application procedure of any one Naphthol & Base using Exhaust method.

4. a. How reactive dyes are applied on textiles by pad-batch method.

(Or)

b. How will you apply Vat dyes on textiles.

5. a. What is sanforizing? How shrinkage control is achieved using a sanforizing machine.

(Or)

b. Explain the test procedure for fastness to washing.

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

036 – TEXTILE DYEING

**PRACTICAL (132 Hours)
DYEING OF CELLULOSIC FIBERS**

Total= 66 Hours

List of Experiments:

1. Identification of fibres by burning and solvent tests
2. Desizing and determination of starch content in a fabric using enzyme desizing method.
3. Scouring and determination of scouring loss of desized cotton fabric
4. Bleaching of scoured fabric with hydrogen peroxide
5. Estimation of total hardness of water using EDTA method.
6. Determination of pH using pH meter, pH paper and Electronic pH meter.
7. Dyeing of cotton hank with direct dyes followed by suitable after treatment
8. Dyeing of cotton hank with azoic dyes
9. Dyeing of cotton hank with cold brand reactive dyes
10. Dyeing of cotton hank with hot brand reactive dyes
11. Dyeing of cotton hank with vat dyes
12. Dyeing of cotton hank with pigment dyes
13. Dyeing of cotton hank with sulphur colors with after treatment.
14. Dyeing of PET/ cotton blend with disperse/vat dyes
15. Estimation of absorbency of the scoured fabric by drop test
16. Estimation of absorbency of the scoured fabric by wicking height and sinking time tests
17. Estimation of dry and wet rubbing fastness of dyed material
18. Estimation of wash fastness (Any one test from ISO 1 To 5)
19. Estimation of light fastness of dyed material
20. Estimation of shrinkage of fabric

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DYEING OF PROTEIN SYNTHETIC FIBERS & BLENDS PRACTICAL

List of Experiments:

Total= 66 Hours

1. Dyeing of two shades of silk with acid dyes
2. Dyeing of silk with reactive dyes.
3. Dyeing of two shades of wool with acid dyes
4. Dyeing of wool with metal complex dyes
5. Dyeing of nylon with acid dyes
6. Dyeing of nylon with disperse dyes
7. Dyeing of nylon with metal complex dyes
8. Dyeing of polyester with disperse dyes by carrier method
9. Dyeing of polyester with disperse dyes by HT/HP method
10. Dyeing of acrylic with Cationic dyes
11. Dyeing of acrylic with Disperse dyes
12. Dyeing of PET/ cotton blend with disperse/reactive dyes by two bath process
13. Dyeing of Cotton/ Wool blends with Reactive / Acid dyes
14. Dyeing of Nylon/ Cotton blends with Acid / Reactive dyes
15. Dyeing of Acrylic/ Cotton blends with Basic / Acid dyes
16. Dyeing of Acrylic/ Wool blends with Basic / Acid dyes
17. Dyeing of PET/ Wool blends with Disperse / Acid dyes
18. Dyeing of PET/ acrylic blends with Disperse / basic dyes
19. Dyeing of PET/ Wool blends with Disperse / Metal Complex dyes
20. Dyeing of Polyester / Viscose blends with Disperse / Reactive dyes.

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DEPARTMENT OF TECHNICAL EDUCATION

ADD-ON TECHNICAL COURSE

037- TEXTILE PROCESSING & COMPUTER COLOUR MATCHING

Duration : 6 Months
Classes : Two days per week

Hours : 2 Hours per day
Total Hours : 96

THEORY (30 Hours)

UNIT-I : Introduction

6 Hrs

Textile fibre – definition -Properties-Classification – sequence of processes in fibre to yarn manufacture- sequence of processes in yarn to fabric manufacture (Weaving and Knitting), Brief study of Yarn numbering system - Brief idea about Acids, Alkali, Salts, Oxidizing, Reducing agents & auxiliaries–pH & its importance in textile processing- Role of auxiliaries in textile processing (Detergents, Wetting Agent, levelling agent ,dispersing agent defoamer, carrier)

UNIT-II : Chemical preparation for textile colouration

6 Hrs

Sequence of processes involved in textile processing of cotton (Woven & Knitted) fabrics and yarn (flow chart only)-Objects of singeing-Type of singeing-Objects of desizing-Enzymatic desizing by Pad-batch method and continuous method using J-box.

Mercerization & scouring

Objects of mercerization-principle and working of chainless mercerizing machine for woven fabric-objects of scouring - mechanism of scouring – scouring of cotton fabrics using the machines such as Kier, Jigger and J-box.

Bleaching

Object of bleaching-classification of various bleaching agents- hypochlorite bleaching-process of bleaching with H₂O₂ using Jigger / Jumbo .continuous bleaching of cotton with hydrogen peroxide using J-box.

UNIT-III : Dyeing process – (Theoretical aspects of colouration)

6 Hrs

Introduction to Dyeing: Theory of Colour – Definitions- Affinity, Substantivity, Exhaustion- Expression, and % of shade - Effect of M: L ratio, salt, temp & time of dyeing. Classification of dyes and pigments-application of dyes to various fibres-Classification of dyes based on their mode of application – dyeing of cotton with reactive dyes , vat dyes and sulphur dyes.(recipe and procedure only).Dyeing of silk with acid dyes – dyeing of polyester with disperse dyes-Dyeing machines – Brief Study .

UNIT-IV : Printing & Finishing

6 Hrs

Comparison between dyeing and printing – style and method of printing – ingredients in printing paste. Direct style of printing with pigment dyes on cotton (recipe and process only)– direct style of printing with reactive dyes on cotton – recipe and process only – direct style of printing with disperse dyes on polyester (recipe and process only). one discharge & resist style of printing-Flat screen and rotary screen preparation (brief study only)–Table screen printing – flat bed screen printing machine –rotary screen printing machine (brief study with line diagram) –Brief introduction to chemical & mechanical finishing.

UNIT-V : Computer Colour Matching

6 Hrs

Concept of computer color matching – Metamerism – working principle of computer color matching system –uses of CCM in terms of recipe prediction , color difference value , pass / fail test , fastness rating,Meta-merism index ,Whiteness/ yellowness index.

References:

Author	Title	Publisher	Year
A.Edwinsunder	Chemical preparation of Textiles for colouration	SSM ITT & PC, Co-op store	2005
John shore	Cellulosic dyeing	SDC Publications, UK	
Prayag.R.S.	Tech.of Tex.Printing	Mrs.Prayag 127 Belgium Rd, Dharwad	1986
S.Udhayamarthandan	Technology of Textile Printing	SSMITT & PC, Students Co-operative stores, Komarapalayam	2007
Datye KV and Vaidhay A.A	Chemical processing of Synthetic Fibres and blends	John Wiley & Sons, New York.	1982
Dr. G.Nalankilli and G.S.Jeyapragasham	Textile Finishing	SSMITT Students Co-operative Stores, Komarapalayam	

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DEPARTMENT OF TECHNICAL EDUCATION

ADD-ON TECHNICAL COURSE

**037 – TEXTILE PROCESSING & COMPUTER COLOUR
MATCHING**

MODEL QUESTION PAPER

Time: 2 Hrs

MAX. Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions: All Question carry Equal Marks

1. Give the physical and chemical properties of cotton fibre?
2. Write any two objects of singeing?
3. What are the different methods available for desizing?
4. Classify the various bleaching agents used for cotton fabric?
5. What do you mean by mercerization?
6. Write the importance of PH?
7. Define Affinity?
8. What is the role of a leveling agent?
9. State the various classes of reactive dyes?
10. What do mean by vatting?
11. What dyes can be used for polyester dyeing?
12. How vat dyes are classified?
13. Define method of Printing?
14. Define resist style of printing?
15. What are the advantage of computer color matching system?

PART – B (5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (a) or sub-division (b) of each question.

1. a. How do you carry out the scouring and bleaching of knitted fabrics using Soft flow machine?
(Or)
b. How do you carry out the bleaching of cotton fabrics with H_2O_2 using J – box machine?
2. a. Give the application procedure of vat dye by continuous dyeing method.
(Or)
b. Explain how reactive dyes are applied by continuous method
3. a. Explain how disperse dye is applied on polyester material by HT/HP method.
(Or)
b. Explain the principle and process of resist printing on reactive ground using pigment
4. a. How Reactive dyes are printed by steaming and silicate padding methods
(Or)
b. Explain how finishes are classified.
5. a. Briefly explain any two types of mechanical & chemical finishes?
(Or)
b. Discuss how will you measure fastness of dyed material to different agencies using computer color matching system.

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

037- TEXTILE PROCESSING & COMPUTER COLOUR MATCHING

PRACTICAL (66 Hours)

List of Experiments:

1. Identification of fibres by burning test & solvent test
2. Desizing and determination of starch content in a fabric using enzyme desizing method.
3. Scouring and determination of scouring loss of desized cotton fabric
4. Bleaching of scoured fabric with hydrogen peroxide
5. Dyeing of cotton hank with Cold Brand & Hot Brand reactive & Vinyl Sulphone reactive dyes
6. Dyeing of cotton hank with vat dyes
7. Dyeing of cotton hank with sulphur colors with after treatment.
8. Dyeing of silk with acid dyes
9. Dyeing of polyester with disperse dyes by HTHP method
10. Dyeing of acrylic with cationic dyes
11. Direct style of printing with hot brand reactive dyes by steaming method
12. Direct style of printing using pigments on cotton.
13. Direct style of printing on polyester using disperse dyes (Print-dry- HTHP Steaming /Thermosol method)
14. Tie & Dye resist style of printing using reactive dyes (Multi color effect)
15. Finishing of the given cotton fabric using 2 % starch.
16. Finishing of the given cotton fabric using 2 % softener.
17. Estimation of wash fastness of fabric
18. Estimation of shrinkage of fabric
19. Using computer color matching system find out the following for the given Sample
 - i. Colour difference delta E value.
 - ii. Colour strength comparison
 - iii. Recipe prediction by quick match
 - iv. Recipe prediction by manual match in CCM system
 - v. Fastness grading
 - vi. Re- dyeing recipe
 - vii. Re- formulation recipe.
20. Determine the whiteness and yellowness index using computer color matching system.

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

038 - VISUAL BASIC PROGRAMMING

Duration	: 6 Months	Hours: 2 Hours per day
Classes	: Two days per week	Total Hours : 96

THEORY (36 Hours)

Unit – I Introduction to the VB Environment

Visual Basic Overview & Technology – Event driven programming – VB development environment
Tool box – code window – Form window – Project window – properties window - Menus – Project –
Format – Debug - Run

Unit – II VB programming Language

Event handling – Using properties – Methods – variables - Data types– Dim statement -Variable scope –
Constants – Arrays – User Defined types – Comments – Statements – operators – Loops & decision
structures – if..then..else,select .. case , Do..loop, For, while – Exiting loop

Built-in functions : MsgBox() – Inputbox() – String manipulation functions - Len() - Trim() - Lcase()-
Ucase() - Left()- Right() - Mid() - Instr()

Unit – III Creating the User Interface

Controls – Command Button – Textbox – Frame – Label – Check Box – Radio Button – List box –
combo box – Scrollbars - Drive list box – Directory list box – file list box

Building the User-Interface – Creating an application – Building menus – Menu editor

MDI application – Parent and child.

Unit – IV Working with advanced controls and Graphics

Timer control - Common dialog – Status bar – toolbars

Graphics : Objects and properties for drawing - Line – shape controls – Image and Picture Box . Pset(),
Line(), Circle() methods.

Unit V – Files & Databases

File management – Text file – Sequential – Random files – Open – Seek – Record structures -

Database : definition . Designing the Database – Using data manager to create the database -ADO control
- Data control -Database name – Recordsource – Recordset – methods – MoveFirst- Movenext –
Moveprevious- Movelast – Binding controls to the data table – Finding records

DDE and OLE – applications.

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

038 – VISUAL BASIC PROGRAMMING

Model Question Paper

Duration : 2 Hrs.

Maximum marks:50

Part – A

10 x 2 = 20

Answer any 10 of the following in short, All questions carry equal Marks

1. List any two component of VB-IDE.
2. List any Menu in the Visual studio environment.
3. State any two properties of Form control.
4. What is a variable?
5. How will you declare a constant ?
6. Write the syntax if ..then else statement.
7. List any 2 two controls in toolbox.
8. What is an MDI form? List any one important property of that control.
9. What are the types of scrollbars available in VB?
10. List any two application where Common dialog control can be used.
11. Write short note on: status bar.
12. Write any two graphics method.
13. What is a sequential file?
14. Write the syntax of Seek# and explain.
15. Explain the Freefile() function.

Part – B

5 x 6 = 30

Answer all the questions by choosing either A or B of each question:

16 A. What is Event driven programming? Does VB support events? Justify.

(OR)

B. List the components of VB-IDE and explain any two.

17.A. List the datatypes supported by VB and explain any two.

(OR)

B. State the looping statements in VB and explain any one.

18.A. Compare and contrast the different types of listbox.

(OR)

B. What is a Menu? Explain the components of it.

19. A. What is Common Dialog control? Write a VB code to change the backcolor of a Form using Common dialog control.

(OR)

B. Write notes on: Image and Picture Box.

20. A. What is a Random file? Explain the statements used for random file operation.

(OR)

B. What is a database? State and explain any one control used for database operation in VB.

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE

038 – VISUAL BASIC PROGRAMMING
PRACTICAL (60 Hours)
(Lab Exercises)

1. Write a VB program to accept any character from keyboard and display the type of the character.
2. Write a VB program to accept any character from keyboard and display whether the character is vowel or not
3. Write a VB program to accept a string and convert the lowercase characters to uppercase and vice versa.
4. Write a VB program to implement NOTEPAD application.
5. Write a VB program to implement a simple calculator using control arrays.
6. Develop a VB application to display digital clock with start and stop buttons
7. Using FRAME and RadioButton, develop a QUIZ application.
8. Using GRID control, develop a application to accept 3 marks for a class of 10 students.
9. Using FILE,DIRECTORY, DRIVE controls implement the operation of Common Dialog Box control.
10. Using Horizontal and vertical scrollbars, write VB code to move any object in a Form.
11. Write a VB application to animate any object
12. Develop a application to implement PAINTBRUSH application.
13. Develop a program to view tiled images.
14. Create a sequential file and store the text entered through a TextBox into the file.
15. Create a Random file to store and retrieve employee information. Accept the Eno of an employee and display the corresponding data of the Employee.
16. Create an employee table and develop an application to perform ADD, MODIFY, DELETE, VIEW operation on the table.
17. Create a Student table and develop an application to perform ADD, MODIFY, DELETE, VIEW operation on the table.
18. Create a database for inventory control and develop an application to perform ADD, MODIFY, DELETE, VIEW operation on the table.
19. Using OLE control call windows programs and application programs.
20. Using DDE control implement simple database management application.

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
039-WEB DESIGN

Duration : 6 Months
Classes : Two days per week

Hours : 2 Hours per day
Total Hours : 96

THEORY (36 Hours)

UNIT- I HTML

- 1.1 What is HTML - Basic Tags of HTML - HTML Tag - TITLE Tag - BODY Tag ;
Formatting of Text : Headers - Formatting Tags: BOLD, ITALICS, UNDERLINE,
PARAGRAPH, TT, STRIKETHROUGH, EM, BR and HR tags - PRE Tag - FONT Tag -
Special Characters - Working with Images -META Tag .

UNIT- II ADVANCED HTML

- 2.1 Links - Anchor tag – Lists - Unordered Lists - Ordered Lists - Definition Lists; Tables -
TABLE, TR and TD Tags - Cell Spacing and Cell Padding - Colspan and Rowspan;
Frames: Frameset - FRAME Tag – Frame inside other frames - NOFRAMES Tag ; Forms
: FORM and INPUT Tag - Text Box - Radio Button – Checkbox - SELECT Tag and Pull
Down Lists : Hidden - Submit and Reset ; Some Special Tags: COLGROUP - THREAD,
TBODY, TFOOT - _blank, _self, _parent, _top – IFRAME – LABEL - Attribute for
<SELECT> - TEXTAREA

UNIT- III INTRODUCTION TO JAVASCRIPT

- 3.1 JavaScript Basics : Need of scripting languages – Variables and Data Types : Declaring
Variables – Life span of variables - Data Types - Operators : Assignment , comparison,
computational and logical operators - Control Structures : Conditional Statements - Loop
Statements : for, while, for in, break and continue statements

UNIT- IV ADVANCED JAVASCRIPT

- 4.1 Object-Based Programming and Message boxes: Functions - Executing Deferred Scripts –
objects : Document object, Predefined objects, Array object, History object , location
object - Dialog Boxes - Alert Boxes - Confirm Boxes - Prompt Boxes.
- 4.2 Javascript with HTML : Events - Event Handlers : onLoad and onUnload – onFocus and
onBlur – onError - Forms : Forms Array – Form element properties – Example program.
- 4.3 Using JavaScript URLs – Client-side Image maps – Server Side Image Maps – Status bar –
Cookies – Live Connect – Java Console – Java Script to Java – Java to JavaScript
Communication.

UNIT- V CASCADED STYLE SHEET

- 5.1 Introduction – Features – Syntax – External style sheet – internal style sheet – inline styles – multiple style sheet – Background – text – font – Border – outline – Margin – padding – list – table – Simple Examples using above properties.

REFERENCE BOOKS

S.No	TITLE	AUTHOR	PUBLISHER
1.	Internet and Web Design	Ramesh Bangia	Firewall Media
2.	Web Design	Jenkins	Wiley India
3.	HTML and Web designing	Kris Jama and Konrad King	Tata McGraw Hill Publishing Ltd
4.	Using HTML 4, XML and Java 1.2	Eric Ladd and Jin O' Donwell	Prentice Hall of India, New Delhi
5.	Web Technology and Design	C. Xavier	New Age International Publishers, New Delhi
6.	Java Server Pages	Ivan Bayross	Shroff publishers & Distributors Pvt Ltd, Delhi
7.	Teach yourself web Technologies	Ivon Bayross	BPB publications – 2002
8.	Web programming	Chris Bates	Wiley – Dreamtech India Pvt Ltd
9.	Web Technology	Ramesh Bangia	Firewall Media, New Delh0069

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
039-WEB DESIGN**

MODEL QUESTION PAPER

Time: 2 Hrs

MAX. Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions: All Question carry Equal Marks

1. Expand the term HTTP and HTML
2. State the purpose of <FRAME> and <FRAMESET> tag.
3. State the use of BR and HR tags.
4. List any two formatting tags used in HTML.
5. State the use of Meta tag.
6. How to create table using HTML?
7. State the needs of scripting languages.
8. Explain break and continue statements with an example.
9. Write down the general syntax of switch statement in JavaScript.
10. State the use of alert box.
11. What is an event?
12. What is session object?
13. What is inline style?
14. What is padding in CSS?
15. State the difference between internal and external style sheet.

PART – B (5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

- 16 A.. Explain different types of lists with an example HTML page. [6]
(OR)
B. Explain the general structure of HTML page with an example program. [6]
17. A Define the terms “Cell Spacing and Cell Padding” and Explain [6]
(OR)
B What are the tags used to create a table? Explain [6]
- 18 A.. Explain different types of data types available in Java script. [6]

(OR)

B. What is an Event? Explain different types of event handler with an example program. [6]

19 A. What are the different types of message boxes available in JavaScript? Explain any one of them with an example. [6]

(OR)

B. Write a JavaScript code that converts the entered text into upper case. [6]

20 A. Write a program using CSS to set the background colors, fonts and paragraphs. [6]

(OR)

B. Explain different types of style sheet with an example. [6]

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
039-WEB DESIGN
PRACTICAL (60 Hours)

1. Design a HTML page describing your profile in one paragraph. Design in such a way that it has a heading, a horizontal rule, three links and your photo. Also, write three HTML documents for the links. Include facilities for forward, backward and HOME.
2. Design a HTML page about your friends. List your friends. Each friend's name is a link. Prepare separate HTML documents for each friend and call them in the appropriate link.
3. Design a single page website for your polytechnic containing a description of the courses offered. It should also contain some general information about the university such as its history, the campus, its unique features and so on. The site should be colored and each section should have a different color.
4. Create a web page that provides links to five different websites.
5. Design a web page that has 5 equal columns. The table should look the same in all screen resolutions.
6. Make out a brief bio-data of yours and code it as an HTML page. You can consider using tables to show your academic history.
7. Write a Java script code that converts the entered text to uppercase
8. Write a Javascript code to validate the username and password. The username and password are stored in variables.
9. Write a Java Script code using frames and Events (When a cursor moves over an object it should display the specification of the object in another frame)
10. Write Javascript function that finds the maximum of three given numbers.
11. Write HTML document with Javascript to count the number of vowels in a text typed in a TextArea..
12. Write a Code in Java Script to count number of times you move over a link or record.
13. Write a program to check whether a person will be permitted to open a particular page or not. Use permission checker component.
14. Write a program using CSS to create a time table for the class.
15. Write a program using CSS to set the background colors, fonts and paragraphs.

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
040-WEB DESIGNING AND ANIMATION

Duration : 6 Months
Classes : Two days per week

Hours : 2 Hours per day
Total Hours : 96

THEORY (36 Hours)

UNIT- I HTML

- 1.1 **Introduction to HTML:** What is HTML - Basic Tags of HTML - HTML Tag - TITLE Tag - BODY Tag ; Formatting of Text : Headers - Formatting Tags: BOLD, ITALICS, UNDERLINE, PARAGRAPH, TT, STRIKETHROUGH, EM, BR and HR tags - PRE Tag - FONT Tag - Special Characters - Working with Images -META Tag .

UNIT- II ADVANCED HTML

- 2.1 **Advanced HTML:** Links - Anchor tag – Lists - Unordered Lists - Ordered Lists - Definition Lists; Tables - TABLE, TR and TD Tags - Cell Spacing and Cell Padding - Colspan and Rowspan; Frames: Frameset - FRAME Tag – Frame inside other frames - NOFRAMES Tag ; Forms : FORM and INPUT Tag - Text Box - Radio Button – Checkbox - SELECT Tag and Pull Down Lists : Hidden - Submit and Reset ; Some Special Tags: COLGROUP - THREAD, TBODY, TFOOT - _blank, _self, _parent, _top – IFRAME – LABEL - Attribute for <SELECT> - TEXTAREA

UNIT- III INTRODUCTION TO FLASH

- 3.1 Exploring the Interface : Learning Flash Tool Basis – Using the Menu bar – Using tools for Navigation and Viewing - Working with Selections and the Pen Tool - Working with the Drawing and Painting Tools – Stroke and Fill Panels, Pencil, Line, Oval , Rectangle Brush, Dropper, Ink Bottle, Paint Bucket, Eraser tool – Applying color – Working with text.

UNIT- IV CREATING FLASH GRAPHICS

- 4.1 Exploring the time line: Viewing and manipulating the Time line – Editing on the Timeline – Checking out the Library : Symbols and Instances – Drawing in Flash – Animating in flash: Frame-by –Frame Animation – Tweening – Guide Layers – Masking Animations
- 4.2 Using Bitmaps and other media with flash: Understanding Vector Versus Bitmap images – Importing External Media – Importing Vector graphics – Importing bitmap Images – Using Bitmaps as Fills – Tracing Bitmaps.

UNIT- V ADVANCED TOPICS IN FLASH

- 5.1 Understanding sound for flash : Basics of Sampling and Quality – Sound file import formats – Sound Export Formats Used by Flash

5.2 Importing and Editing Sounds in Flash : Importing sounds into flash – Assigning a Sound to a Button – Adding Sound to the Timeline – Synchronizing Audio to Animations – Stopping sounds – Editing Audio in Flash

5.3 Adding Basic interactivity to Flash Movies : Understanding Actions and Event Handlers.- Navigating Flash Timelines – Controlling Movie Clips

5.4 Programming Flash Movies with Action script.

REFERENCE BOOKS

S.No	TITLE	AUTHOR	PUBLISHER
1.	Internet and Web Design	Ramesh Bangia	Firewall Media
2.	Web Design	Jenkins	Wiley India
3.	HTML and Web designing	Kris Jama and Konrad King	Tata McGraw Hill Publishing Ltd
5.	Web Technology and Design	C. Xavier	New Age International Publishers, New Delhi
9.	Flash 5 Bible	Robert Reinhardt and Jon Warren Lentx	IDG Books India (p) L td.

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE**

**040-WEB DESIGNING AND ANIMATION
MODEL QUESTION PAPER**

Time: 2 Hrs

Marks: 50

PART-A (10 x 2 = 20 Marks)

Answer any **TEN** questions, **All question carry equal marks**

1. Expand the term HTTP and HTML
2. State the purpose of <FRAME> and <FRAMESET> tag.
3. State the use of BR and HR tags.
4. List any two formatting tags used in HTML.
5. State the use of Meta tag.
6. How to create table using HTML?
7. What is the use of pen tool?
8. State the difference between the Brush tool and the Pencil Tool?.
9. What is the use of color mixer?
10. What are the three types of text files available in flash?
11. What do you mean by Onion Skinning?
12. What are the advantages of Tweening?
13. Define the term “ Sample rate”
14. What is the use of Loop Setting in the Sound panel?
15. What is action script?

PART – B (5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.

16. A.. Explain different types of lists with an example HTML page. [6]
(OR)
B. Explain the general structure of HTML page with an example program. [6]
17. A Define the terms “Cell Spacing and Cell Padding” and Explain [6]
(OR)
B What are the tags used to create a table? Explain [6]

- 18 A.. Briefly explain the tools used for Navigation and Viewing. [6]
(OR)
- B. Explain the usage of the following tools : (i) The Arrow Tool (ii) Pen tool (iii) The Dropper Tool. [6]
- 19 A Briefly explain the tools used for Navigation and Viewing. What are the principal parts of the timeline? Explain briefly. [6]
(OR)
- B Write down the procedure for drawing a line and a polygon. . [6]
- 20 A. Briefly explain about Sound file Import formats. [6]
(OR)
- B. Write down the procedure for adding sound to the Timeline. [6]

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DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
040-WEB DESIGNING AND ANIMATION
PRACTICAL (60 Hours)

1. Design a HTML page describing your profile in one paragraph. Design in such a way that it has a heading, a horizontal rule, three links and your photo. Also, write three HTML documents for the links. Include facilities for forward, backward and HOME.
2. Design a HTML page about your friends. List your friends. Each friend's name is a link. Prepare separate HTML documents for each friend and call them in the appropriate link.
3. Design a single page website for your polytechnic containing a description of the courses offered. It should also contain some general information about the university such as its history, the campus, its unique features and so on. The site should be colored and each section should have a different color.
4. Create a web page that provides links to five different websites.
5. Design a web page that has 5 equal columns. The table should look the same in all screen resolutions.
6. Make out a brief bio-data of yours and code it as an HTML page. You can consider using tables to show your academic history.

PHOTOSHOP

7. Create a design by using the various Selection Tools, cutting and pasting the images.
8. Using multiple layers, create a design with the use of masking various images.
9. Create a design by the use of text tools and apply text effects.
10. Change the color of an image by the use of selective coloring method.
11. Create a design by applying the various filtering effects.

FLASH

12. Mixing the audio and video.
13. Develop advertisement for a college admission in flash for 15 secs.
14. Design a company logo with animations for 10 secs.
15. Design a cartoon for 15 secs
16. Design a movie clip for 15 secs
17. Design a 3D animation picture.
18. Develop a page for a CBT package.

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**DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE**

041-TEXTILE CAD

Duration : 6 Months
Classes : Two day per week

Hours : 2 Hours per day
Total Hours : 96

THEORY (36 Hours)

MODULE I

Requirements of Fibres: Definitions of some important terminologies, Requirements of fibre formation, Characteristics of good textile fibre, essential and desirable properties of apparel grade textile fibres & technical grade textile fibres, classification of fibres, advantages and disadvantages of natural fibres.

MODULE II

Definition of Textile, importance of textiles in various fields, importance of textile industry in India. Nature of textile industry in India :- handloom, power loom sector, organized / composite mills, spinning sector, knitting, non woven, wool & silk sector, man-made fibre / yarn sector, garment industry, machine manufacturer, fashion industry sector. Role & importance of textile / weaving technologist in textile industry, work profile of technologist, opportunities.

MODULE III

Process flow chart for conversion of yarns into woven fabrics, knitted fabric and non-wovens. Yarn preparation – objects of winding, warping, sizing & drawing-in pirn winding, demonstration of machines to show how the objectives are achieved, passage of yarn on each machines & brief description of how the objectives are achieved.

MODULE IV

Fabric forming – classification of looms, drop box, dobby, jacquard loom & their purpose. Demonstration & brief description of mechanism of non automatic power looms such as shedding, picking, beatup, let-off & take-up warp protector & weft stop motion. Calculations – warp weight, weft weight, fabric weight in gm/sq.m. fabric production / loom.

MODULE V

Cloth Structures - Constructional details – warp / weft count, thread densities, width, length, selvages, light, medium & heavy constructions, capability of weaving machine to weave different constructions, warp & weft cover, cloth cover, crimp, contraction in warp & weft way. Introduction to interlacement of thread. Presentation of weaves, design, draft, peg plan, denting plan, need & importance. Study of weaves – plain, twill & satin (basics only).

DEPARTMENT OF TECHNICAL EDUCATION ADD ON TECHNICAL COURSE
041-TEXTILE CAD
Practical (60 Hours)

1. Basics of Computers
2. Basic of Hardware Knowledge for a Textile Designer
3. Trouble Shooting – Problems & Solutions
4. Systems of Software's in Textile CAD
5. Color Theory
6. Design Creation & Editing Using Photo Shop - Raster Based Images
7. Design Creation & Editing Using Photo Shop - Vector based images
8. Dobby Designing using textile software
 - Stripe & Check Fabric Designing
 - Dobby Fabric Designing
 - Extra Warp Figuring & Extra Weft Figuring
9. Jacquard Fabric Designing using Textile Software
10. Tracing & Developing of Jacquard Designs
 - Applying different Weave & their simulations (Single , Double, & Multi Layer)
 - Electronic Jacquard Configurations.
11. Screen Printing Fabric Designing using Textile Software
 - Artwork Development & Color Reduction
 - Repeat Creation
 - Color Separations
12. Embroidery (Fabric Designing) using Textile Software
 - Artwork Development
 - Lettering Techniques
 - Embroidery – Different Styles
 - Appliqué Embroidery
 - Sequencing
 - Boring etc...
 - Repeat Creation
 - Conversion of Embroidery Design into machine format.
13. Application of 3 D Texture Mapping in Textile & fashion Industry.

DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE
041-TEXTILE CAD
Model Question Paper

TIME: 2 HRS

MARK: 50

PART-A

Answer any Ten Questions

10x 2 = 20

1. What is mean draft / peg plan?
2. Define monochrome
3. Define split complementary
4. Define extra warp & extra weft figuring?
5. Difference between Dobby& Jacquard
6. Different between Roster based image & vector based image?
7. Write any two software's for Roster & vector based design
8. Define printing?
9. Define surface ornamentation?
10. Define virtual mapping
11. Define stripe and check fabric?
12. What is the use of warping in stripe design manner?
13. Define slub yarns & it's uses in textile design?
14. Define color scheme?
15. What are the primary colors?

PART-B 5x 6 = 30

Answer all the Questions choosing either subdivision (a) or (b) of the each question

- 1). a) Explain in detail about color theory and its application in textile industry
(or)
b) Role of textile designer in textile industry
- 2). a) Explain about Dobby mechanism in weaving?
(or)
b) Explain in detail about method of shedding formation?
- 3). a) Draw a design , draft, peg plan for plain and its derivatives, Twill & Twill derivatives & satin & satin derivatives
(or)
b) Explain in detail about method of printing
- 4). a) Draw a diagram any five repeats creation in detail?
(or)
b) Write a detail notes on
- 5). a) Surface ornamentation & their traditional Embroidery techniques compare with modern techniques?
(or)
b) Write about virtual mapping & its application in textile industry?

**DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE**

042-APPAREL MARKETING AND MERCHANDISING

Duration	: 6 Months	Hours	: 2 Hours per day
Classes	: Two day per week	Total Hours	: 96

Theory (36 Hours)

MODULE I

Organization of the Apparel Business: Introduction to apparel industry - organization of the apparel industry types of exporters Business concepts applied to the apparel industry - International trade.

MODULE II

Marketing: Functional organization of an apparel firm. Responsibilities of a marketing division – marketing objectives and Strategies - Marketing research - Types of markets: Retails and wholesale strategies for merchandise distribution- retailers - sourcing flows and practices. Marketing plan. Labeling and licensing.

MODULE III

Merchandising: Definition of Merchandising - Functions of Merchandising Division - Role and Responsibilities of a Merchandiser - Different types of Buyers -Communications with the buyers – Awareness of current market trends – product development - line planning line presentation. Merchandising Terminology, Types of Approvals

Sourcing: Need for sourcing - sourcing materials - manufacturing resources planning - principles of MRP – Overseas sourcing - sourcing strategies. Supply chain and demand chain analysis - Materials management for quick response - JIT technology

MODULE IV

Production Control, Production Control Analysis, Types of Control Forms, Production Control Reports, Visual Merchandising, and Standard Policy. Trade show participations,

MODULE V

Difference between buyer, Buying office, and buying agencies – Roles & Responsibility, Order confirmation, Transport Terms, Various types of export documents, Pre-shipment Post -shipment documentation, Shipment Terms, Sales Terms & Payment

MODULE VI

Retail Management, Taxation for Tamilnadu State & other State, VAT, CST etc...

**DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE**

042-APPAREL MARKETING & MERCHANDISING

Practical (60 Hours)

1. Marketing Research & Forecasting using statistical tool & Industrial Practice
2. Demand Analysis
3. Communication Practice
4. Handling of orders & dealing with manufactures
5. trade fair participation
6. Different type of approvals
7. Sales Promotion
8. Production Analysis – Qualitative & Quantitative Techniques
9. Order Confirmation & Shipment Terms & procedures
10. Taxation for Tamilnadu state & other state, VAT, CST etc..

**DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE
042-APPAREL MARKETING & MERCHANDISING**

Model Question Paper

TIME: 2 HRS

MARK: 50

PART-A

Answer any Ten Questions

10x 2 = 20

1. What is marketing?
2. Write a note on Apparel industry?
3. What is the business concept applied to apparel industry
4. Define labeling.
5. What are the types of markets?
6. Write about objectives of marketing.
7. Functions of a merchandiser.
8. Different types of buyer.
9. What are the types of approvals?
10. Write a note and JIT technology
11. Types of control forms
12. What is visual merchandising?
13. Name the various types of export documents.
14. What is retail management?
15. Write a note on VAT

PART-B

5x 6 = 30

Answer all the Questions choosing either subdivision (a) or (b) of the each question

- 1) a) Explain in detail about the organization of the apparel business.(or)
b) Describe about international trade.
- 2) a) Explain the strategies for merchandise distribution(or)
b) Elaborate about licensing.
- 3) a) What is communication & detail about communication with the buyer.
(or) b) Describe in detail about supply chain analysis
- 4) a) Write about production control & production control reports.(or)
b) Narrate about trade shows.
- 5) a) Detail about various types of export documents & Different b/w buyer buying office & buying agencies. (or)
b) Write a note on taxation for Tamil Nadu state & other state.

**DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE**

043-PATTERN MAKING & GRADING

Practical (60 Hours)

1. Preparation of Pattern for different types of sleeves, pockets, collars & cuffs
2. Preparation of Pattern for plackets, sleeves, yokes, & skirts.
3. Preparation of pattern for children's garments – Jabla,
4. Preparation of pattern & grading for children's garments – Frock
5. Preparation of pattern & grading for children's garments – Bala Suit
6. Preparing pattern & grading for basic men's shirt
7. Preparing pattern & grading for basic ladies shirt
8. Preparation of pattern & grading for ladies garments – Salwar
9. Preparation of pattern & grading for ladies garments – Blouse
10. Preparation of pattern & grading for men's garments – Pants
11. Preparation of pattern & grading for men's garments – Salwar

**DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE
043- PATTERN MAKING & GRADING
Model Question Paper**

TIME: 2 HRS

MARK: 50

PART-A

Answer any Ten Questions

10x 2 = 20

1. Importance of taking body measurements?
2. Give the standards body measurements for ladies wear?
3. What is draping?
4. Write the principals of pattern drafting?
5. Type of paper patterns?
6. What is draft?
7. Write the Standards of good fit?
8. Give the fitting techniques?
9. Importance of altering patterns?
10. Define pattern grading?
11. Write the rules in pattern layout?
12. Give the types of layout?
13. write a note on asymmetric designs
14. Use of computer aided pattern making?
15. What is marker efficiency?

PART-B

5x 6 = 30

Answer all the Questions choosing either subdivision (a) or (b) of the each question

1. a) Define grain and write short notes on importance of grain in cutting?
(or)
b) What are the steps in preparing the fabric for cutting?
2. a) Explain in details about the methods of pattern making?
(or)
b) Write in detail procedure for drafting basic bodies for front, back & Sleeve?
3. a) Define yokes and explain about types of yokes?
(or)
b) Prepare a patter for ladies blouse?
4. a) Prepare a pattern for basic front, back bodies & grade for three sizes?
(or)
b) What are the general principals for pattern alteration?
5. a) Layout for different fabric designs – explain?
(or)
b) Explain in details about computer aided pattern making & grading using relevant software?

DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE
044 - EXPORT MANAGEMENT

Duration : 6 Months
Classes : Two day per week

Hours : 2 Hours per day
Total Hours : 96

Theory (36 Hours)

MODULE I

IMPORTANCE OF EXPORT TO NATIONAL ECONOMY

Export marketing of apparel, global, scene, prospects for Indian Apparel in Overseas market, globalization GATT and WTO

TRADE TERMS IN EXPORT

FOB, C&F, CIF – payment terms in Export & Export Trade, Documentary Letter of Credit, Various Types, Documents against payment, documents on acceptance, consignment sale

MODULE II

EXPORT PACKAGING

Functions, Method of Packing, Export Marketing and labeling shipping marks, good marking procedures, Choose a Market Mechanics of Choosing Market, Agents, and Selection of Agent.

INSTITUTIONAL FRAME WORK FOR EXPORT TRADE IN INDIA

TDA, TFAI, IIP, ICA, FICO, EPC, AEPC, Export Promotional Activities of AEPC – CB - IIFT

MODULE III

FACILITATES AVAILABLE FOR GARMENT EXPORTERS

Cash compensatory support – Duty Draw Back – DEPB, Export Credit Guarantee Corporations, Export – Import Bank, Market Development, Assistance – 100% Export Oriented Scheme of the Govt.of.India-Free Trade Zones

MODULE IV

DOCUMENT CONNECTED WITH EXPORT

Commercial Invoice, Custom invoice, Consular Invoice, Certificate of Origin, certificate of inspection packing list, bill of lading, airway bill.

MODULE V

EXPORT CONTROL REGULATIONS RELATED TO EXPORT

Export Finance by Commercial Banks, Packing Credit, Post Shipment Credit, Foreign Exchange Management, Banking Procedures for Export Market & Export Incentives

MODULE VI

GARMENT EXPORTING COMPANY

Procedure for starting a new export Company, Product Development for a Export Market.

DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE
044 - EXPORT MANAGEMENT

PRACTICAL (60HRS)

1. Prospects for Indian apparel in overseas marketing
2. Various types of documents.
3. Export & trade documentation.
4. Different standard policies for export documentation
5. Documents for claiming export assistance.
6. Steps dealing with an export order procedure.
7. Difference in export promotional activities.
8. Other auxiliary documents preparation.
9. Market development assistance.
10. Difference in export control regulation related to export documentation
11. Procedure for starting a new export company.
12. Procedure for product development for an export marketing

**DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE
044 - EXPORT MANAGEMENT**

Model Question Paper –1

TIME: 2 HRS

MARK: 50

PART-A

Answer any Ten Questions

10x 2 = 20

1. What is export management?
2. Write the expansion of GATT and WTO?
3. Write about apparel industry?
4. What are the types of packing?
5. What is export packing?
6. Write the promotional activities of AEPC?
7. What is duty draw back?
8. Write a note on export-import bank?
9. What are the types of invoice?
10. What is bill of lading?
11. What is foreign exchange management?
12. Name the export incentives.
13. Write a procedure for starting a new export company in short?
14. What is a product?
15. What is product development?

PART-B

5x 6 = 30

Answer all the Questions choosing either subdivision (a) or (b) of the each question

1. a. Give the prospectus for Indian apparel in overseas market.
(or)
b. Write in detail about export management.
2. a. Explain about labeling and shipping procedures.
(or)
b. Describe in detail about selection of agents.
3. a. What are the facilities available for garment exporters?
(or)
b. Write a note on market development.
4. a. Write about the certificate of inspection packing list .
(or)
b. What are the documents associated with exports.
5. a. Write a procedure for starting a new export company.
(or)
b. Write about banking procedures for export market.

**DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE**

045-KNITTED GARMENT PRODUCTION

Duration	: 6 Months	Hours	: 2 Hours per day
Classes	: Two day per week	Total Hours	: 96

Theory (36 Hours)

MODULE I

Introduction: comparison between knitted and woven fabrics. Warp knitting and weft knitting. Knitting Needles. Fundamentals of formation of knit tuck and float stitches. Basic knitted structures and their production. i.e., plain, rib, interlock and purl. Quality of yarn required for knitting. Yarn preparation for knitting.

MODULE II

Circular knitting: circular knitting production of various weft knitted structures needle control in circular knitting machines. Factors affecting the formation of loop. Effect of loop length and shape on fabric properties. Faults in knitted fabrics, causes and remedies. Production calculation.

MODULE III

Flat knitting: basic principles; elements of flat knitting machines. Different types of flat knitting machines manual, mechanical and computer controlled knitting machines. Production of various fabric designs with flat knitting machines.

MODULE IV

Warp knitting: warp knitting fundamentals. Machine classification. Preparation of yarn for warp knitting. Types of yarns used for winter garments: quality specification, quality requirements of fabrics for winter Garments. Type of circular sweater strip machines, production techniques for sweaters. Fully fashioned sweaters description, knitting of slippers-cardigans,

MODULE V

Control defects in full fashioned Knitting-production of full fashioned sleeves on v-bed flat machines. Cut and sew sweaters: cutting techniques, cutting machines-operating difficulties and Remedies, sewing of sweater –strips- types of stitches and seams used in sweaters, common sewing defects and its remedies pressing of sweaters-open buck, steam press, body form stem press.

MODULE VI

Pollution Control in Knitting Garment Industries – Recycling of pollutions

**DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE**

045-KNITTING & GARMENT PRODUCTION

PRACTICAL (60HRS)

1. Circular Single Jersey Knitting Machine parts, working machine & machine drive arrangements
2. Interlock Knitting Machine parts , working & machine drive arrangements
3. Flat Knitting Machine parts, working machine & machine drive arrangements
4. Socks Knitting Machine parts, working machine & machine drive arrangements
5. Circular Knitting Machine parts, working machine & machine drive arrangements
6. Study & Working of Sewing Machine
7. Study of Marker Planning & Improve marker efficiency
8. Working of Spreading & Cutting Machine & working mechanism
9. Working of Sewing Machine, Threading producers & other mechanism
10. Working of Steam pressing machine & working mechanism

**DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE
045-KNITTED GARMENT PRODUCTION
Model Question Paper –1**

TIME: 2 HRS

MARK: 50

PART-A

Answer any Ten Questions

10x 2 = 20

1. Define Knitting?
2. What are the different types of knitting needles used in knitting industry?
3. Draw a basic knitting structure for rib?
4. Factors affecting formulation of loop?
5. Write the elements of flat knitting machine?
6. Difference between warp knitting and weft knitting?
7. What type of used for winter garment manufacture?
8. Write any 5 basic fabric properties?
9. Write any 4 knitted fabric defects?
10. Define pollution?
11. Define course and walls?

PART-B

5x 6 = 30

Answer all the Questions choosing either subdivision (a) or (b) of the each question

1. a) Write in knitted and woven fabric?
b) Explain in detail about yarn preparation for knitting process.
2. a) Explain in detail about circular knitting? What are all the new technologies advantage in today's knitting industry?
b) Write about method of fabric production for interlock knitting machine.
3. a) Explain in detail about warp knitting machine and their 3 method of loop formation in detail?
b) Explain about quality specification 3 quality requirements for winter/summer garments?
4. a) Explain the basic principal of flat knitting machine.
b) Write about causes 3 remedies for knitting garment effects?
5. a) What are different types of pollution 3 its recycling methods?
b) Write about different of loop length 3 its shape on fabric properties?

DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE
046-TRAINING & SEWING

Duration : 6 Months **Hours : 2 Hours per day**
Classes : Two day per week **Total Hours : 96**
Theory (36 Hours)

UNIT I

Fabrics – Fabric properties - Woven, Knits. Sewing Machineries – Classification of sewing machines, parts and functions of single needle machine, Double needle machine, over lock machine, bar tacking machine, Button hole making machine, button fixing machine, feed-of-the-arm machine, blind stitching machine, fabric examining machine. Special attachments, Care and maintenance, common problems and remedies

UNIT II

Stitching mechanism – Needles, bobbin and bobbin case, bobbin winding, loops and loop spreader, threading finger, upper and lower threading, auxiliary hooks, throat plates, take-ups, tension discs –upper and lower thread tension, stitching auxiliaries, pressure foot and its types, Feed mechanisms – drop feed, differential fed, needle feed, compound feed, unison feed, puller feed. Cutting technology – definition, function, scope. Cutting equipment and tools, vertical reciprocity cutting machine, rotary cutting machine, and band knife cutting machine, die-cutters Types of spread and its quality, spreading equipment and tools used for spreading, spreading methods.

UNIT III

Marking methods, positioning marking, types of markers, efficiency of a marker plan, and requirements of marker planning. Pressing Equipments – purpose, pressing equipments and methods – iron, steam press, steam air finisher, steam tunnel, special types – pleating, permanent press. Sewing federal standards for stitch and stitch classification, federal standards for seam and seam classification, Fabric sew ability, sewing threads – types, essential qualities of a sewing thread, manufacturing process of cotton and synthetic threads, twisting process.

UNIT IV

Stitches: Classification –constructive stitches-temporary and permanent stitches standards for good stitches. Seams: definition, types of seams and seam finishes. their suitability and application in various garments. Hem finish. Fullness: definition, methods of introducing fullness in garments-gathers, pleats, flares, flounces, smocking, tucks & darts, methods of controlling fullness.

UNIT V

Neck Finishes: definition of finishes, facing, binding, fitted facing, bias-true bias-joining bias strip
Collars: Definition, factors to be considered in designing collars, classification of collars-Ripped collar, Chinese collar, full roll collar, partial roll collar, square collar, Peter pan collar, shirt collar, scalloped collar, sailor collar, puritan collar, tie collar, turtle collar and shawl collar. Pockets: Selection of pockets design, constructing pockets, patch-pocket, bound pocket, welt pocket, pocket in seam and front hip pocket. Yoke: creating variety in yoke designs, preparing yokes, type yokes, attaching yokes. Plackets: types of plackets-shirt placket, lapped seam, zipper placket, tailors placket, one piece placket, two Piece

placket, fly opening and zipper method. Skirts: its type, adding fullness and controlling fullness, finishing skirts Sleeves: Making and constructing sleeves-set in sleeves, sleeves with bodice style and sleeveless styles.

DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE
046-TRAINING & SEWING

PRACTICAL (60 Hours)

1. *BASIC OF MACHINE OPERATIONS BASIC OF STITCHES*
2. *STITCHES*
3. *SEAMS*
4. *FULLNESS*
5. *NECK FINISHES*
6. *COLLARS*
7. *PLACKETS*
8. *YOKES*
9. *ARRANGE TO STITCH THE FOLLOWING GARMENTS:*
10. *CHILD GARMENTS*
11. *DIAPER*
12. *JABLA SET*
13. *BALA SUIT*
14. *BODIES BLOCK*
15. *SLEEVE BLOCK*
16. *BASIC PANTY*
17. *RHOMPER*
18. *BABY FROCK*
19. *A-LINE FROCK LADIES WEAR*
20. *PETTICOAT*
21. *KAMEEZ / KURTA*
22. *PYJAMA/CHUDIDHAR*
23. *SALWAR*
24. *SKIRT*
25. *SHIRT*
26. *BLOUSE*
27. *NIGHTY*
28. *BASIC BODIES*
29. *BASIC SLEEVE MEN'S WEAR*
30. *BASIC BODICE*
31. *BASIC SLEEVE*
32. *BOXER SHORTS*
33. *SHIRTS*
34. *PANTS*
35. *SUITINGS*

**DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE**

046-TRAINING & SEWING

Model Question Paper

TIME: 2 HRS

MARK: 50

PART-A

Answer any Ten Questions

10x 2 = 20

1. Difference between Woven & knitted fabrics'
2. What are the parts of a sewing machine?
3. Write a short note on special attachments?
4. Write about diff feed dogs?
5. What are the types of cutting machines?
6. What are the diff types of spreading methods?
7. Explain the purpose of pressing.
8. Write a note on sewing threads?
9. What is marker efficiency?
10. Name the types of seam finishes?
11. Define fullness.
12. What are flounces?
13. What is true bias?
14. Write the factors to be considered in designing collars?
15. What are the types of sleeves?

PART-B

5x 6 = 30

Answer all the Questions choosing either subdivision (a) or (b) of the each question

1. A) Explain feed-off-arm m/c with a neat diagram. (or)
B) Give the care and maintenance of a swing m/c
2. A) Explain in detail about different feed mechanisms. (or)
B) Describe the types of spread and its quality.
3. A) What are the different pressing equipments and methods? (or)
B) Explain the manufacturing process for cotton and synthetic threads.
4. A) What are the methods of controlling fullness? (or)
B) Classify stitches and explain them.
5. A) Classify collar and explain in detail about the construction of any 3 collar types.(or)
B) What is the method of preparation of zipper placket?

**DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE**

047-EMBROIDERY CAD

Duration : 6 Months

Classes : Two days per week

Hours : 2 Hours per day

Total Hours : 96

THEORY (36 HOURS)

Module I – Introduction to embroidery

Overview of embroidery, machines, types of fabrics, needles, embroidery rings and their uses, measurements, hand embroidery and machine embroidery, fabrics and colour combinations, kinds of carbons and tracing papers, tracing of embroidery designs, kinds of stitches for embroidery.

Module II – Accessories

Kinds of embroidery articles – handkerchiefs, placemats, cushion covers, T.V. covers, bedspreads, accessories box, coasters, yokes, dupattas, etc.

Module III - Kinds of Stitches

Hand Embroidery: shadow work, appliqué work, mirror work, kashimiri stitch, fly stitch, cross-stitch, etc. Machine Embroidery: Eyelet work, lace work, motif work, scallops, appliqué work, cut work, satin, long and short stitch, etc.

Module IV - Precautions to be taken

Quality of fabrics, threads and colours; precautions to be taken for proper maintenance of embroidery articles.

Module V – Introduction to zardozi

Over of Zardozi art, the recent trends in Zardozi art, application of Zardozi on various garments, the raw material and machines used in the Zardozi art, general precaution to be taken in the Zardozi art preparation.

Module VI - Accessories and Tools

Accessories: Threads, beads, chancy, gold sally, white sally, gold Zardozi, silver Zardozi, mirror, needles, etc. Tools: Tape, scissor, drafting table, board, pen, pencil, gutter paper, etc.

Module VII - Frame Preparation

Frame fitting procedure, cloth fitting, general precautions to be taken for frame preparation.

Module VIII - Design Development and Drafting

Design development, pattern making, and drafting of a design pattern on the fabric fitted to the frame.

Module IX - Zardozi Design Making

Stitching, filling of Zardozi material, knotting, etc. (20-25 varieties of Zardozi designs are taught)

DEPARTMENT OF TECHNICAL EDUCATION

ADD ON TECHNICAL COURSE

047-EMBROIDERY CAD

PRACTICAL (60 HOURS)

1. Basic Computer Fundamentals
2. Computer Problems and trouble shooting practice
3. Tools and its used in Embroidery Software
4. Development of simple motifs using Embroidery Software
5. Development of complex motifs Embroidery Software
6. Cross Stitch embroidery designing Embroidery Software
7. Different types of stitches and its uses Embroidery Software
8. Tracing of drawings into embroidery designs Embroidery Software
9. Tracing of real fabrics into embroidery designs Embroidery Software
- 10.Repeat Setting for Embroidery Machine
- 11.Designing with Fonts
- 12.Development of Logos Embroidery Software
- 13.Embroidery Labels development Embroidery Software
- 14.Designing for T shirts,
- 15.Saree Embroidery Designing Embroidery Software
- 16.Designing for Home furnishings Products Embroidery Software
- 17.Designing for Chudidars and other women garments
- 18.Embroidery costing & Embroidery for Different Industrial Needs (Sarees, Chudidhar, Home Textile, Garments etc...
- 19.Industrial Visits – All Kind of Embroidery Products.
- 20.Project Report - Portfolio Designing

DEPARTMENT OF TECHNICAL EDUCATION

ADD ON TECHNICAL COURSE

047-EMBROIDERY CAD

Model Question Paper –1

TIME: 2 HRS

MARK: 50

PART-A

Answer any Ten Questions

10x 2 = 20

1. What is surface ornamentation?
2. Name the parts of the embroidery machine?
3. Name the types of embroidery stitches?
4. What is cut work?
5. What are the quality requirements for selecting the fabric for embroidery work?
6. What is zardozi?
7. What are the raw materials for zardozi work?
8. What is lace work?
9. What are the precautions taken for embroidery machine?
10. Write a note on embroidery threads?
11. How to trace embroidery designs?
12. Write about carbon papers used in embroidery?
13. Write some applications of embroidery designs?
14. What is a motif?
15. Name the soft wares used in embroidery.

Answer all the questions

5 X 6 = 30

1. a. Write a short note on embroidery rings and their uses.
(Or)
b. Draw embroidery machines and explain its parts.
2. a. Explain about embroidery articles.
(Or)
b. Describe in detail about hand embroidery.
3. a. What are the factors to be taken in selecting fabric, needle and needle for embroidery.
(Or)
b. Write a note on maintenance of embroidery machines.
4. a. Write the application of zardozi in various garments.
(Or)
b. What are the accessories used in zardozi work.
5. a. Write a procedure for frame fitting.
(Or)
b. Write about computerized embroidery machine.

**DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE**

048-FASHION CAD

Duration : 6 Months
Classes : Two day per week

Hours : 2 Hours per day
Total Hours : 96

Theory (36 Hours)

Module I - Principles and Elements of Design:

Introduction to elements of Design - Different types of shapes – Different types of Texture on dresses - Light and shade & its effects on dresses. Introduction to Principles of Design - Introducing Unity on dress - Emphasis on dress Proportion on dress - Harmony - on dress - Rhythm on dress — Illusion Created by Lines, Shapes & Texture.

Module II - Colour Aspects

Lines - colours, Light theory of colour, Pigment theory of color - Prang color system - Balance, Emphasis, and Harmony - Sketching and Drawing - Fashion. Classification and Types of Fashion - Origin of Fashion Language - Philosophy and Design - Street Fashion -Middle market-couture fashion-fashion brand.

Module III - Design Pattern in Fabrics

Pattern in Fabrics - Naturalistic abstract Conventional - Geometric floral, animate stylized, Traditional abstract - Spot Design - All over design - Unit Repeating design -Half drop design - Oque box Design - Diamond base Design - Diagonal wave line design - Drop reverse design - Rectangular base design - Vertical wave line design -Striped, Checked, Border designs - Selecting patterned fabrics.

Module IV - Design Aspects

Concepts of Design - Background to the world of Fashion Design - Definition of Fashion Designing - Initial steps fashion designing - Ingredients of Fashion Designing - Computer Aided-Designing. Designing Development - Types - Source Identification -Drawing Fashion Details - Design Development from photographs - Decoration.

Module V - Wardrobe Planning and Fashion Industry

Characteristics of well-dressed person - Factors influencing personality - Wardrobe planning for different ages - Economy in dress - Dress for occasions - Dress for seasons. Fashion-Director, Fashion Designer - Study of American, French, Italian and Indian Designers - Fashion Shows - Fashion magazines / Videos.

DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE
048 - FASHION CAD

1. Basic Computer Fundamentals
2. Computer Problems and trouble shooting practice

FLAT SKETCHES DEVELOPMENT

1. Development of simple flat sketches
2. Development of Mens Wear
3. Development of Childrens Wear, Women Wear, Mens Wear
4. Development of real flat sketches with all stitches, accessories, colours, designs, textures, prints, stripes, checks etc.,
5. Style modifications, colour modifications and design modifications combo
6. Development of seasonal wears

FASHION ILLUSTRATION DESIGNING

1. Designing according to head theory
2. Tracing and developing of flesh figures
3. Draping techniques
4. Designing fashion illustrations with different poses.
5. Fashion Illustrations & Combo of men, Women, Children
6. Real effects in illustrations, accessories.
7. Fashion Illustrations for seasonal wears
8. Fashion Illustrations with different designs, colour, texture, prints, stripes, checks etc.,
9. Designing mood board - story board - colour board - customer board – Flat sketches – Illustrations – Combos - Presentations.

EMBROIDERY DESIGNING

1. Tools and its uses & Repeat setting
2. Development of simple motifs & complex motifs.
3. Different types of stitches and its uses.
4. Tracing of drawings into embroidery designs.
5. Tracing of real fabrics into embroidery designs.
6. Designing with Fonts
7. Appliqué designing techniques
8. Designing for T shirts, Chudidars, Sarees etc.,

TEXTURE MAPPING & VIRTUAL FASHIONING

1. Mapping of designs from photographs
2. Mapping of colour
3. Mapping of dobby, jacquard, print designs etc.,
4. Mapping of texture
5. Mapping of skin tone and facials
6. Mapping of accessories
7. Mapping of Background, effects etc.,

ACCESSORIES DEVELOPMENT

- Designing of Bags, Hats, Shoes, Jewellery, Watches, Chains, Pendants etc.,
- Designing of different Labels, Logos, Tags etc.,

PROJECT PORTFOLIO PREPARATION

**DEPARTMENT OF TECHNICAL EDUCATION
ADD-ON TECHNICAL COURSE
048 - FASHION CAD**

TIME: 2 HRS

MARK: 50

PART-A

Model Question Paper

Answer any TEN questions: All Question carry Equal Marks

10 x 2 = 20

1. List the tools & equipments used for drawing.
2. What do you mean by figure proportions?
3. Define: Eight Head Theory
4. Define: Warm and Cool colours.
5. Define the term Tint and Shade.
6. What is meant by colour scheme?
7. Write notes on Elements of Design.
8. Define Harmony on Dress.
9. What are the illusions created by lines.
10. Draw the sketch for half drop design.
11. What do you mean by Structural design?
12. What are the tools used in computerized design development?
13. Mention the work of fashion director.
14. Write short notes on fashion forecasting.
15. What your mean by wardrobe planning?

PART-B

5x 6 = 30

Answer all the Questions choosing either subdivision (a) or (b) of the each question

- 1) a. Explain in detail about Eight Head Theory.
(OR)
b. How will you analyze proportions for Male & Female figure? Explain.
- 2) a. Explain in detail the Pigment theory of colours.
(OR)
b. Explain in detail about Poster colour painting with suitable example
- 3) a. Explain in detail about principles of designs.
(OR)
b. How will you create dress design with the help of textures for various occasion.
- 4) a. Write notes on 1. Spot Design. 2. Border Design.
(OR)
b. Explain in detail about computerized design development
- 5) a. Explain in detail the importance of fashion magazines and fashion videos.
(OR)
b. Explain the work of any two Indian Fashion Designers.

DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE
049-APPAREL QUALITY MANAGEMENT

Duration	: 6 Months	Hours	: 2 Hours per day
Classes	: Two day per week	Total Hours	: 96

Theory 36 Hours

MODULE I

Definition and scope of quality control – establishing merchandising standards – Establishing raw material quality, quality control specifications – quality control of raw material

MODULE II

Establishing processing quality specification – training quality control personnel – the quality standard control – quality control inspection, procedures for processing – quality control of finished garments – quality control and government contacts – quality control for packaging, warehousing and shipping – statistical quality control. Sampling plans — wide quality standards.

MODULE III

Function of production control – production analysis – quality specifications – qualitative Specifications – scope of apparel manufacturing activity –coordinating departmental activities – distribution of documents and records

MODULE IV

Type of control forms – basic production systems – principles for choosing a production a production system – evaluating production systems – flow process grids for production control – scheduling calculation, graph methods, scheduling bundles of varying amounts, mathematical formulas for scheduling – producing many styles simultaneously - producing many styles consecutively in one line.

MODULE V

Design satisfaction tests. - Fabric specification - cloth defects - four point system - shrinkage potential. Garment specification - manufacturing specification – name of operation and associated details in respect of sewing, dyeing and washing of garments. Garments testing-seam strength, seam slippage, garment checking procedure, interlining-peel bond strength. Style features - trims specification - stitch specification - size scale – garment dimensions and tolerances Quality of trims and accessories. Defects in garments and their remedies - A, B and C zones in a garment
With respect to defects.

MODULE VI

Quality Analysis for Children’s Wear, Casual Wear, Sports Wear, Army Wear, Uniform Wear,

**DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE**

**049-APPAREL QUALITY MANAGEMENT
Practical (60 Hours)**

1. Different type of Quality management concept used in garment industry
2. Fabric Inspection system used in apparel industry
3. Garment Defects in apparel industry
4. Garment inspection system in apparel industry
5. 5s Concept used in apparel industry
6. 7 quality control tools used in apparel industry
7. Implementation of ISO in apparel industry
8. Quality inspection in accessories , pressing & Packing
9. Quality audit system in apparel industry.
10. Total quality management system used in apparel industry
11. Quality control form & document used in apparel industry
12. Different type of quality testing in apparel industry
13. Kaizen concept used in apparel industry
14. Lean Manufacturing used in apparel industry.

**DEPARTMENT OF TECHNICAL EDUCATION
ADD ON TECHNICAL COURSE
049-APPAREL QUALITY MANAGEMENT
Model Question Paper**

TIME: 2 HRS

MARK: 50

PART-A

Answer any Ten Questions

10x 2 = 20

1. What is mean by quality?
2. What is mean by ISO?
3. Define Inspection?
4. Define 4 point system used in apparel industry?
5. Write the seven quality control system used in apparel industry?
6. Different quality control form & documents used in apparel industry?
7. Write any 4 clothing defects for apparel industry?
8. Write the different quality test used for apparel garments?
9. Difference between garment specification & garment standard?
10. Define seam puckering & reason for the same?
11. Define the objective of 5'S concept used in apparel industry?
12. Define care labeling? Use of care labeling & garment industry?
13. Write the major quality problem for knitted fabrics?
14. Write any 4 Major & Minor defects in garment manufacturing?
15. Define fie in garment manufacturing?

PART-B

5x 6 = 30

Answer all the Questions choosing either subdivision (a) or (b) of the each question

1. a) Explain different types of fabrics used in garments industry?
(or)
b) Explain the raw material inspection used in garment industry?
2. a) Describe about the final inspection? (Or)
b) Explain the care labeling system?
3. a) Describe in detail about the quality tools used in garment industry?
(or)
b) Explain in detail about the lean manufacturing system used in garment industry?
4. a) Describe in detail about the sampling methods?
(or)
b) Different types of quality test used in garment industry & detail about any two test?
5. a) Explain in detail about house of quality & taguchi quality loss functions?
(or)
b) Explain in details about the ISO & TQM to improve quality management system ?

**DEPARTMENT OF TECHNICAL EDUCATION
GUINDY, CHENNAI – 25
ADD-ON TECHNICAL COURSE
050-AUTOMOTIVE ENGINEERING**

Duration : 12 months
Classes : Two days per week

Hours : 2 Hours per day
Total Hours : 192

THEORY (72 HOURS)

Unit I : Introduction to Automobiles and Main Parts of Engine and their repairs Hrs: 12

Introduction to Automobiles – Definition of Engine – Main Engine Components and their functions

**Unit II : Fuel Injection System, Cooling and Lubrication and Emission Control System
Hrs: 12**

Fuel system of Petrol and Diesel Engine – Electronic Fuel Injection – MPFI –CRDI - Turbo Charger – EGR - Catalytic Converter - Emission Norms – Types of Cooling System and Types of Lubrication system

Unit III : Electrical System (Including Air Condition System) Hrs : 12

Basic Electricity – Battery – Electronic Ignition System – Automobile Dynamo and Controls – Starter – Air Condition System

Unit IV : Clutch, Gear Box, UJ, Propeller Shaft, Rear Axle, Differential, Suspension and Steering System

Hrs : 20

Types of Clutch – Types of Gear Box – Universal Joint – Propeller Shaft – Types of Rear Axle – Differential – Suspension types – Steering – Wheels and tyres

Unit V : Automotive Dealer Workshop Activities Hrs : 16

Front Office Management – Workshop Management – Warranty Procedures – Customer Care Activities – Parts Indenting Procedures – Vehicle Sales Procedures

ADD-ON TECHNICAL COURSE
050-AUTOMOTIVE ENGINEERING
MODEL QUESTION PAPER

Time : 2 hours

Max. Marks : 50

Part – A (10 x 2 = 20 Marks)

Answer any **TEN** Questions: All Question Carry Equal Marks

1. How shall you classify a Heat Engine?
2. Write the main parts of an Engine
3. What is the Abbreviation for MPFI and CRDI?
4. What is the purpose of Turbo Charger?
5. Write the List of Auto-Electrical System
6. What are the main components of Air Conditioning System?
7. Mention the types of Clutch and Gear box
8. What is the function of the Propeller Shaft?
9. How many types of Universal Joints are there?
10. What is the function of Differential?
11. Mention the various types of suspension system
12. Write the purpose of checking the wheel alignment
13. Write the Seven Steps of Customer Care Process
14. Mention the moving and non moving parts in a dealer workshop
15. Mention the Types of Warranty

Part –B (5 x 6 = 30 Marks)

Answer all the questions choosing either sub-division (A) or sub-division (B)

1. (A). Describe the working of Four- stroke Petrol Engine with a neat sketch
(or)
(B). What are the difference between Petrol Engine and Diesel Engine
2. (A). Explain Ohm's Law
(or)
(B). Which points may be remembered for Maintenance of a Battery
3. (A). Describe Single Plate Clutch with a neat diagram
(or)
(B). Describe the Hypoid Type Final Drive
4. (A). Explain the Principle of an EGR system
(or)
(B). Explain the necessity of MPFI system in detail
5. (A). Explain the Customer Care activities of a Automotive Dealer Workshop in detail
(or)
(B). Explain the Sales Operating system of a Automotive Dealer Showroom.

DEPARTMENT OF TECHNICAL EDUCATION

ADD-ON TECHNICAL COURSE

050-AUTOMOTIVE ENGINEERING

PRACTICAL (120 HOURS)

List of Experiments

Identify the Trouble and Fault and perform the remedial action for the following Automobile Components

1. Petrol Engine Assembly
 2. Diesel Engine Assembly
 3. Fuel Supply Components
 4. Ignition System and MPFI System
 5. Auto Electrical Components
 6. Clutch and Gear Box
 7. UJ and Propeller Shaft
 8. Axles and Differential
 9. Suspension and Steering Components
 10. Air Condition System
 11. Brakes and Emission Control Equipments
 12. Garage Equipments
- and
13. Front Office Activities and Dealer Workshop Visit

DEPARTMENT OF TECHNICAL EDUCATION
ADD – ON TECHNICAL COURSE

051- CERAMICS – WHITEWARE AND POTTERY

Duration	:	6 Months	Hours	:	2 Hours / Day
Classes	:	2 Days / Week	Total Hours	:	96

THEORY (40 Hours)

UNIT I: **INTRODUCTION TO CERAMICS**

Definition & Subdivision of ceramics – Domestic and Industrial uses of ceramics

Plastic materials:

Clay – definition –primary and secondary clay – china clay, ball clay, fire clay, red clay or surface clay, Physical and Chemical properties and Uses

UNIT – II: **NON – PLASTIC MATERIALS**

Quartz – Action of heat, Physical and Chemical properties and Uses

Feldspar- Calcite – Alumina - Sodium carbonate – Sodium silicate – Binders, Lubricants –Physical and Chemical properties and Uses

Gypsum – Plaster of Paris – Manufacture – Physical and Chemical properties – Model - Pattern – Mould preparation

Glaze Materials : Quartz, Feldspar, Red lead, White lead – Borax – Calcite - Fluorspar – Barium oxide – Colouring oxide etc – Physical and Chemical properties and Uses

UNIT III : **WHITEWARE**

Earthenware and Porcelain – Body preparation – Various treatments - Shaping of crockery ware, Dinner ware, Wall Tiles, Floor Tiles

Sanitary ware: Vitreous – Fireclay sanitary – Red clay pottery – Shaping methods Throwing – Jiggering and Jolleying – Extrusion – Turning -Pressing– Casting electrolyte – Slip properties - Drying Biscuit Firing – Glazing and Firing

Drying : Mechanism of drying – type of drier – drying defects

Firing : Action heat on ceramic wares –firing schedule – firing defects

UNIT IV : **GEOLOGY**

- i. Introduction to Geology – Origin of earth – Age of earth – interior of earth
- ii. Definition of minerals – crystals – faces – solid crystals – edges – interfacial of angle – system of crystal – physical properties of minerals – luster cleavage – hardness – streak
- iii. Definition - rock, igneous, sedimentary and metamorphic.
- iv. Physical properties of clay, quartz, feldspar, calcite and gypsum

UNIT V :

CHEMISTRY OF CERAMICS

- i. Elements of ceramic raw materials
- ii. Constituents of ceramic materials – Determination : Loss on Ignition, Silica, Alumina, Iron Oxide, Titanium di oxide, Sodium Oxide, Potassium oxide, Calcium oxide, Magnesium oxide.

051- CERAMICS – WHITEWARE AND POTTERY

PRACTICAL (56 Hours)

CERAMIC PRACTICAL

1. Moisture content determination – weighing method
2. Water of plasticity
3. Dry and fired shrinkage
4. Dry and Fired strength
5. Sieve analysis
6. Bulk density and porosity
7. Crazing test
8. Dry content for 1 cc
9. Mould making
10. Estimation of electrolyte
11. Casting rate
12. Hollow ware casting
13. Brick hand moulding
14. Throwing
15. Jigger and Jolleying
16. Pressing
17. Glaze preparation
18. Stain preparation
19. Glaze application
20. Glaze firing



GOVERNMENT OF TAMIL NADU

DEPARTMENT OF TECHNICAL EDUCATION, CHENNAI 600 025

APPLICATION FORM FOR ADMISSION TO CERTIFICATE COURSE (TECHNICAL)

Application No.

Registration No.

(to be assigned by Office)

Name of the Certificate Course and duration :

1. Name of the Candidate (in Block letters) :

2. Name of the Parent / Guardian :

3. Address for Communication :

E-mail Id :

Contact Telephone No.:

Mobile No. :

Grid boxes for telephone and mobile numbers

STD Code

4. Name of the Govt. Arts & Science College & Branch of Study (where the candidate pursuing U.G) :

Roll No.:

Year of study:

5. Date of Birth (Christian Era) (as found in SSLC or equivalent Certificate) :

Day

Month

Year

6. Sex : (✓ the appropriate box)

Female Male

7. Nationality :

8. Name of the Community : (✓ the appropriate box)

SC ST MBC & DNC BC(O) BC(M) Others

Affix Passport Size Photograph and attested by the Principal /HOD

DECLARATION

I,(Name in full) son / daughter of hereby solemnly declare that the information furnished and the statements given in the application, and the enclosures are true, correct and complete. I further declare that should it be found otherwise, I will be liable to forfeit my seat and or removed from the rolls of the Institution at whatever stage of study I may be, besides making me liable for Criminal Prosecution.

Place:

Date :

Signature of Parent/Guardian

Signature of the Applicant

BONA-FIDE CERTIFICATE

This is to certify that Mr./Ms..... Studying (branch and year) in College is the bona-fide student of this College.

Date:

Signature of the Principal with Seal