

Diploma in Garment Technology

I Semester

TEACHING AND EXAMINATION SCHEME

[illegible]

Department of Technical Education

State Board of Technical Education & Training, Telangana

Course Title : Basic English	Course Code : 18 GT-101F
Semester : I	Course Group : Foundation
Teaching Scheme in Periods (L:T:P:) : 36:24:0	Credits : 3
Type of Course : Communicative Language Teaching + Assignments	Total Contact Hours : 60 periods
CIE : 60 % Weightage	SEE : 40 % Weightage

Prerequisites: Basic knowledge of English Language

COURSE OUTCOMES

	At the end of the course the students will have the ability to:
101.1	acquire vocabulary for social interaction
101.2	listen and reciprocate appropriately
101.3	analyse and evaluate the written material
101.4	convey ideas in the form of letters
101.5	express feelings and make requests
101.6	speak and write grammatically correct sentences

CO-PO Matrix

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	Mapping POs
101.1	2	1	1	-	-	2	-	3	3	3	1,2,3,6,8,9,10
101.2	2	2	--	2	--	2	--	3	3	3	1,2,4,6,8,9,10
101.3	2	2	--	--	1	1	2	3	3	3	1,2,5,6,7,8,9,10
101.4	2	2	2	--	2	1	2	3	3	3	1,2,3,5,6,7,8,9,10

101.5	2	2	--	--	2	--	2	3	3	3	1,2,5,6,7,8,9,10
101.6	2	2	--	--	--	--	--	3	3	3	1,2,8,9,10

COURSE CONTENT AND BLUE PRINT OF MARKS FOR SEE

S.No	Unit Name	Period	Questions to be set for SEE			Marks Weightage	Weightage %
			R	U	A		
1	Speaking	8	3	1	0	11	10.00%
2	Listening	3	2	0	0	4	3.63%
3	Vocabulary	5	2	1	0	9	8.18%
4	Reading	6	0	2	0	10	9.09 %
5	Grammar	14	3	1	1	21	19.09%
6	Writing	24	0	1	5	55	50.00%
	Total	60	10	6	6	110 marks	100

Legend: R; Remembering, U: Understanding A: Applying

COURSE CONTENTS

UNIT – 1 SPEAKING

Duration: 8 Periods

1. Need For English
2. Classroom English
3. Expressing Feelings
4. Expressing Likes & Dislikes
5. Making Requests

UNIT - 2: LISTENING

Duration: 3 Periods

6. Describing Words

UNIT –3: VOCABULARY

Duration: 5 Periods 7. How to

use a Dictionary

8 Words Often Confused

UNIT - 4: READING

Duration: 6 Periods

9 The Mighty Mountain and Little Lads of Telangana

10 The Adventures of Toto

11 Tiller turns Engineer - An Innovation

UNIT -5: GRAMMAR**Duration: 14 Periods**

12. Tenses

13. Basic Sentence Structures

14. Voice

15. Asking Questions

UNIT- 6: WRITING**Duration: 24 Periods**

16. Paragraph Writing - I

17. Paragraph Writing - II

18. Letter Writing – I

19. Letter Writing – II

Suggested Learning Outcomes:

On completion of the course the students will be able to:

- express feelings, likes and dislikes and make requests
- use describing words, dictionary and distinguish confusing words.
- read, comprehend and answer the questions
- use appropriate tenses, voices, structures and ask questions
- write paragraphs and letters.
- communicate fluently

Internal evaluation

Test	Units	Marks	Pattern
Mid Sem 1	Speaking: 1,3 Listening: 0 Vocabulary:7 Reading:9 Grammar:12,15	20	Part A 5 Short answer questions Part B 2 Essay questions out of 3 Questions Part C 2 Essay questions out of 3 Questions
Mid Sem 2	Speaking: 2,4,5 Listening: 6 Vocabulary:8 Reading:10,11 Grammar:13,14	20	Part A 5 Short answer questions Part B 2 Essay questions out of 4 Questions Part C 2 Essay questions out of 3 Questions
Slip Test 1	Speaking: 1,3 Listening: 0 Vocabulary:7 Reading:9 Grammar:12,15	5	2 Essay Questions out of 3 Questions
Slip Test 2	Speaking: 2,4,5 Listening: 6 Vocabulary:8 Reading:10,11 Grammar:13,14	5	2 Essay Questions out of 3 Questions
Assignment	One assignment per one semester	5	Different group assignments of Higher order Questions that develop problem solving skills and critical thinking should be given
Seminars	One seminar per one semester	5	
	Total	60	

Suggested Student Activities

- Listen to a song and answer the questions
- Listen to a passage/conversations/dialogues/speeches and answer the questions
- Role Plays
- Quiz
- Self introduction
- Talking about routines
- Debates
- Elocution
- Selling a product with appropriate vocabulary
- Reading a selected text/news paper for specific purpose
- Using a dictionary
- Reading aloud with proper pronunciation and intonation

- Writing about routines
- Describing people
- Describing places
- Creating Advertisements
- Writing short messages
- Writing a recipe/process
- Interpreting advertisements/classified
- How to use google translate
- Surprise test
- Vocabulary games:
 - Cross words
 - Guessing the missing letter
 - Dumb charades

Textbook: English for Polytechnics

REFERENCES:

1. Practical English Grammar by A.J Thomson and A.V. Martinet
2. A Course in Phonetics and Spoken English by J. Sethi and P.V Dhamija
3. Word Power Made Easy by Norman Lewis
4. Games for Language Learning by Andrew Wright, David Betteridge and Michael Buckby
5. Five Minute Activities by Penny Ur
6. English Dialogues by M. Martin

e-learning:

1. www.duolingo.com
2. www.bbc.co.uk
3. www.babbel.com
4. www.merriam-webster.com
5. www.ello.org
6. www.lang-8.com
7. youtube.com
8. Hello English(app)
9. mooc.org
10. <https://onlinecourses.nptel.ac.in>

Semester End Examination marks distribution

	Short answer	Essay	Marks
Part A	10	0	20
Part B	0	4/6	20
Part C	0	4/6	40
Total	10	8/12	80

Note: Semester end examination will be conducted for 80 marks but will be calculated for 40 marks.

C18-Semester End Examination (SEE)
Model Paper- 18Common-101F
(Basic English)

Time: 3 Hours

Total Marks: 80

PART – A

Instructions:

10 Q X2 M = 20 Marks

- i) **Answer all the following questions:**
- ii) **Each question carries two marks**

1. Write any two expressions used by the students in the classroom.
2. Fill the blanks with suitable expressions of feelings:
 - a) I feel _____ when I get a first class in diploma first semester.
 - b) The teacher was _____ with me when I was late to class.
3. Change the following into requests:
 - a) Switch on the fan.
 - b) Give me your book.
4. Identify any four describing words in the following paragraph:

We have a beautiful house near a long, muddy road. Our house is surrounded by rose plants. The tiny white roses shower snowy petals every day. My friends frequently visit our house to enjoy the greenery.
5. Fill the blanks with suitable describing words:
 - a) As he is very _____ (fat/fit) he cannot run fast.
 - b) The tree is so _____ (tall/high) that it is difficult to climb.
 - c) The _____ (more/much) money one gets, the _____ (less/little) one spends.
6. Use *raise* and *rise* in your own sentences.
7. Use *expect* and *except* in your own sentences.
8. Fill in the blanks with the suitable verb forms given in brackets:
 - a. She _____ (drink/drinks/drunk) tea every morning.
 - b. My parents _____ (has been/have been/is been) looking after an orphanage for seven years.
9. Write one sentence each for the following structures:
 - a. S V IO DO
 - b. S V SC
10. Change the voice of the following sentences:
 - a. He teaches English.
 - b. He was served tea by his mother.

PART- B

GROUP-I

ANSWER ANY TWO QUESTIONS

2x5=10

11. List any five problems you face in learning English and suggest solutions.
12. List at least five steps involved in finding the meaning of 'engineer' in a dictionary
13. Read the following passage and answer the questions that follow:

Subhas Chandra Bose was born in a Bengali Kayasth family on January 23, 1897 in Cuttack (OdiyaBaazar), Orissa, to Janakinath Bose, and Prabhavati Devi. He studied in an Anglo school at Cuttack (now known as Stewart School) until standard 6. He then shifted to Ravenshaw Collegiate School of Cuttack. Then he went to the prestigious Presidency College where he studied briefly. His nationalistic temperament came to light when he was expelled for assaulting Professor Oaten for his anti-India comments.

His high score in the Civil Service examinations meant an almost automatic appointment. He then took his first conscious step as a revolutionary and made up his mind not to join the government service. Meanwhile, Indian nationalists were shocked and outraged because of the Amritsar massacre and the repressive Rowlatt legislation of 1919. Returning to India, Bose wrote for the newspaper Swaraj and took charge of publicity for the Bengal Provincial Congress Committee. His mentor was Chittaranjan Das, spokesman for aggressive nationalism in Bengal. Bose worked for Das when the latter was elected mayor of Calcutta in 1924. In a roundup of nationalists in 1925, Bose was arrested and sent to prison in Mandalay, where he contracted tuberculosis.

Questions:

- a. Where was Subhas Chandra Bose born?
- b. Who were his parents?
- c. Why was Bose expelled from Presidency College?
- d. What is the synonym of 'outrage'?
- e. Why was he arrested and sent to Mandalay?

GROUP-I

ANSWER ANY TWO QUESTIONS

2x5=10

14. Read the following passage and answer the questions that follow.

In the pond, we find that different organisms live in different regions. This is due to some conditions like availability of different amounts of food, air light, etc. We find organisms like dragonfly, mayfly and kingfisher living above the surface hovering above the pond and then resting over a bamboo pole or a stick jutting out of the surface of the pond. They get food from the surface of the pond.

Organisms like snail, whirling beetle and pond skater live on the surface. The larva of mayfly and dragonfly also live on the surface of the pond. Plants like pistia float on the surface completely while those like the lotus have roots going deep under. On the surface organisms are easily eaten up by others because there is little protection for them. However, there is plenty of food and air and this is why fish usually come to the surface to feed.

Great water boatman, leech and mosquito larva are found in midst of water. Fish and crabs also swim around this region. Pond margins have several grasses, frogs, cranes, crabs, etc. Fish usually lay eggs here. The bottom of the ponds has plants like Hydrilla and animals like mussels, flatworms and some maggots (larva of some insects). Light is minimum here, but food, in the form of dead and decaying matter is in plenty.

Questions:

- a) Why do different organisms live in different regions?
- b) Where do we find organisms like dragonfly, mayfly and kingfisher?
- c) Why do fish usually come to the surface to feed?
- d) Where do fish usually lay eggs?
- e) Where do plants like Hydrilla grow?

15. Write a paragraph using the hints given below.

Library in our polytechnic – a big hall – several tables and chairs – newspapers – journals – visiting hours – two computers with internet – three cards to each student – 20000 books – many reference books

16. Frame five questions on the basis of the following passage.

Floods generally occur when there is very heavy rainfall. Most commonly, floods are caused when a river overflows its banks and the water spreads to the surrounding areas. Floods are also caused by collapse of a dam built across a river, blocking of river channel by landslides, cyclones, tsunamis, strong tides, storms and sudden melting of large amounts of snow on mountains. Floods are very common in India. They mostly occur in the plains of northern India. Floods

cause damage to life, property and crops. It causes water-logging for several days. Diseases such as cholera, malaria and dengue generally spread in areas hit by the flood. Trees are very helpful in controlling floods. They stop the water from spreading fast. Special dams can also be built to slow down the speed of water.

PART-C

GROUP-I

ANSWER ANY TWO QUESTIONS

2x10=20

17. Write a paragraph in 120 words on a movie seen by you recently.
18. Write a letter to your uncle about your plan to visit his place during summer.
19. Write a letter to the Principal of your institute requesting him to provide you admission into hostel.

GROUP-2

ANSWER ANY TWO QUESTIONS

2x10=20

20. Write a paragraph in 120 words about the importance of following traffic rules
21. Write a letter to Rama Publishers, Abids, Hyderabad requesting them to send you a catalogue of books published by them.
22. Write your routine using present simple tense.

Mid Sem Examination marks distribution

	Short answer	Essay	Marks
Part A	5	0	10
Part B	0	2/3	10
Part C	0	2/3	20
Total	5	4/6	40

Note: Mid sem examinations will be conducted for 40 marks but will be calculated for 20 marks

State Board Of Technical Education
Basic English
18Common-101F
First Semester
Mid Sem -1 Model Paper

Time: 1 hour 30 minutes

Marks : 40

PART-A

Instructions:

5 X 2 =10 marks

Answer all questions

Each question carries 2 marks

1. How do you feel in the following situations.
 - a) You watched your favourite hero's movie.
 - b) You stood first in the exam.
2. Fill in the blanks with appropriate verb forms
 - a) She ____ (go) to her village every year.
 - b) He ____ (see) the Tajmahal in 2017.
3. Fill in the blanks with appropriate verb forms
 - a) I ____ (sing) for the last 10 years.
 - b) He ____ (travels) to the U.S.A. next week.
4. Rewrite the following as yes or no questions
 - a) They wrote the exams.
 - b) The train is late.
5. Write any 4 ways a dictionary can be used to improve language skills.

PART-B

Instructions:

2 X 5 =10 marks

Answer all questions

Each question carries 5 marks

6. What are the problems you faced in learning English?
7. Write a few suggestions to improve one's English.
8. How do you locate a word in a dictionary?

PART-C

Instructions:

2 X 10 =20 marks

Answer all questions

Each question carries 10 marks

9. Frame 10 wh questions for the given passage

Subhas Chandra Bose was born on 23 January 1897 in Cuttack, Orissa. He studied in Cuttack and then moved to Presidency College in Calcutta for further studies. He did his B.A. in Philosophy and went to England to appear for the Civil Services examination. He returned to India and started a newspaper called Swaraj. His mentor Chittaranjan Das was active and open in his criticism of British rule. Bose followed his footsteps and was arrested and sent to prison in Mandalay. He joined the Indian National Congress. Later he parted ways with the Congress. He revived the Indian National Army.

10. Read the passage given and answer the questions

It was way back in 1972 that NASA began developing a space shuttle that could launch like a rocket but fly and land like an airplane—a unique transportation system for deploying satellites and payloads into outer space. It was indeed a technological wonder as it was reusable unlike the earlier, one shot disposable rockets, which were used to place astronauts and equipment into the Earth's orbit. Basically, a space shuttle consists of an orbiter that carries astronauts and payload attached to solid rocket boosters and an external fuel tank. To lift the space shuttle, weighing about 2 million kg, from the launch pad to its orbit that is about 185 to 643 km above the Earth, the shuttle uses two powerful solid rocket boosters, which provide a thrust of about 11.7 million N. In addition the SRB's support the entire weight of the space shuttle orbiter and fuel tank on the launch pad.

- a) Why is the space shuttle unique?
- b) What are the parts of the space shuttle?
- c) What are the functions of the solid rocket boosters?
- d) What is the space shuttle used for?
- e) Find one word in the passage that means throw away after use.

11. Write 10 sentences in the present continuous verb form describing what is going on around you as you write your exam.

State Board Of Technical Education
Basic English
C-18-Common-101F First Semester
Mid Sem –II
Model Paper

Time: 1 hour 30 minutes

Marks : 40

PART-A

Instructions:

5 X 2 =10 marks

Answer all questions

Each question carries 2 marks

1. Write any four expressions used by teachers in the classroom.
2. Select appropriate words and fill in the blanks
 - a) I am too _____ (weak/week) to do the work.
 - b) She did not _____ (except/accept) the award.
3. Write any four things that you like about your college.
4. Rewrite the following sentences as requests
 - a) Give me your phone
 - b) Buy me a cup of coffee
5. Write two sentences each in the given structure
 - a) S.V.O.
 - b) S.V.IO.DO.

PART—B

Instructions:

2 X5=10 marks

Answer any 2 questions.

Each question carries 5 marks

6. Change the voice for the following sentences.
 - a) He is writing the exam.
 - b) She has won the award.
 - c) They were told a story by the teacher.
 - d) She likes sweets.
 - e) He was caught by the police.
7. Identify the structure of the given sentences
 - a) Birds fly.
 - b) I gave her a book.
 - c) She ate an apple.
 - d) They made him the class leader.
 - e) She is beautiful.
8. Write any ten expressions used by students in the classroom.

PART –C

Instructions:

2 X 10 = 20 marks

Answer any 2 questions

Each question carries 10 marks

9. Read the given passage and answer the questions given:

Subhash Chandra Bose was born on 23 January 1897 in Cuttack, Orissa. He studied in Cuttack and then moved to Presidency College in Calcutta for further studies. He did his B.A. in Philosophy and went to England to appear for the Civil Services examination. Although he did well in the exam, he soon resigned from the services because it meant working against the interests of his country. He returned to India and started a newspaper called Swaraj. His mentor Chittaranjan Das was active and open in his criticism of British rule. Bose followed his footsteps and was arrested and sent to prison in Mandalay. He joined the Indian National Congress. Later he parted ways with the Congress. He revived the Indian National Army. He is believed to have coined the slogan Jai Hind.

- a) Why did Bose go to England?
 - a) What was Chittaranjan Das's attitude towards the British?
 - b) How did Bose fight against the British??
 - c) Why did Bose resign from the Civil Services?
 - d) Pick the word from the passage which means trusted advisor or guide.
10. Describe your friend using appropriate descriptive words. Also write three things you like and three things that you dislike in him/ her.
11. Identify 10 words of description from the passage.

On hot summer nights, Julio and the other boys sleep out in the yard. They put up a tent in a dark corner, where the trees and the bushes are thick. That way the boys can easily imagine they are in wild, uninhabited country. One evening Mike suggested that they tell ghost stories or tales of bear hunts. After a particularly spine-tingling story, Mike couldn't sleep; he was too nervous. About midnight he saw something move in the shadows. "Yeow!" he cried out. "There is a big bear! It is really huge!" In the sudden confusion, the small tent collapsed on top of the boys; each one seemed eager to go in a different direction. Anxious parents ran out of the nearby house. They found a coal-black dog. Like a bear, this animal was very curious.

Department of Technical Education

State Board of Technical Education & Training (TS)

Course Title	Textile Chemistry and Environmental Studies	Course Code	18GT-102F
Semester	I	Course Group	Foundation
Teaching Scheme in Hrs(L:T:P)	2.4:1.6:0	Credits	3
Methodology	Lecture + Tutorials	Total Contact Hours:	35Hrs/60Pds
CIE	60 Marks	SEE	40 Marks

Course Content and Blue Print of Marks for SEE

Unit No	Unit name	Periods	Questions for SEE			Marks weightage	Weightage (%)
			R	U	A		
1.	Fundamentals of Chemistry	8	1	2	-	12	11
2	Water Technology	12	2		1	14	13
3	Pollution	8	2	1	1	19	17
4.	Value Education and Environment Protection Acts	8	-	-	1	10	9
5.	Textile Fibres and Chemical Finishes	12	3	1	2	31	28
6.	Cleansing Agents and Bleaches	12	2	2	1	24	22
	Total	60	10	6	6	110	100

Pre-requisites

This Course requires basic knowledge of science acquired at Secondary School Level.

Course Outcomes

CO1:	Define fundamental Chemistry concepts and Explain the Principles.
CO2:	Explain the terms related to Water Hardness and Removal of Temporary and permanent hardness of water.
CO3:	Explain the causes and remedies for air, noise, Water and Soil pollution.
CO4:	Explain the importance of value education and environmental protection Acts.
CO5:	Explain different polymers, identification of fibres and textile finishes.
CO6:	Evaluate the need and process to use cleaning agents, bleaches and laundry blues.

Course Content

UNIT 1: Fundamentals of Chemistry:

Duration: 8(L:4.8-T:3.2)

Fundamental particles - Atomic Structure- Bohr Theory- Aufbau Principle- Hund's Rule- Pauli's exclusion principle- orbitals- Shapes of s, p and d orbitals- Electronic configuration of elements. Chemical bonding- introduction- types of chemical bonds- ionic and covalent bond with examples-properties of ionic and covalent compounds. Solutions- introduction – expression of concentration of solutions – molarity and normality Acids and bases- Arrhenius theory of acids and bases- pH and related numerical problems - Numerical problems related to degree of hardness

UNIT 2: Water Technology:

Duration: 12(L:7.2-T:4.8)

Introduction- Soft and hard water- Causes of hardness- Disadvantages of hard water- degree of hardness(ppm) – softening methods- Permutit process-ion exchange process- - drinking water- municipal treatment of water for drinking purpose- osmosis- reverse osmosis= advantages of reverse osmosis- sources of water.

UNIT 3: Pollution:

Duration: 8(L:4.8-T:3.2)

Definition of Pollution- Environment-BOD- COD- Bio diversity- Atmosphere- contaminant-air pollution – definition – causes of Air pollution- natural and manmade- Effects of air pollution on human beings, plants, animals and non – living things- control of air pollution- Noise pollution – definition – noise standards- sources of noise pollution- effects of noise- measures to control noise pollution- definition of water pollution – causes of water pollution- effects of water pollution – control measures for water pollution- soil pollution definition – causes- effects – control measures-

UNIT 4: Value Education and Environment Protection Acts: Duration: 8(L:4.8-T:3.2)

Value based environmental education –social values, cultural values, global values, spiritual values and thetical values- Environment protection Acts- constitutional provisions- The Environment Protection Act, 1986- The Air (Prevention and control of Pollution) Act 1981- salient features-Water (Prevention and Control of Pollution) Act 1974- salient features- Central Pollution Control Board- The Telangana State Pollution Control Board.

UNIT 5: Textile Fibres and Chemical Finishes: Duration: 12(L:7.2-T:4.8)

Polymers – definition of monomer-polymer – polymerization – degree of polymerization – classification of polymers based on source- - structure- mode of polymerization - - molecular forces- growth polymerization- requirements of fiber forming polymers- processing of natural rubber from latex- types of polymerization – addition , condensation with examples- Aims / reasons for applying finishes to fabrics- factors influencing selection of finish/ process of applying finish- changes brought about by finishes- chemical finishes – mercerizing- crease resistant finish- creping- fire proof finish- Anti static finish- Anti bacterial finish- Mildew resistant finish- Moth resistant finish- water repellent finish **Identification of Textile Fibres - non technical - feeling test- - burning- –technical tests- solubility and staining test- microscope test(LS view)- cotton- linen- silk- wool – polyester- viscose rayon -Nylon- - distinguishing vegetable fibres from animal fibres with an acid- distinguishing linen from cotton-distinguishing silk from wool-distinguishing rayons from acetate- distinguishing polyester from other fibres.**

UNIT 6: Cleansing Agents and Bleaches Duration: 12(L:7.2-T:4.8)

Definition of soap- detergent – saponification- surfactant- action of soap- composition of soap- types of soaps- qualities of good soap-preparation of soap by cold process- manufacture of soap by hot process – chemical action of detergents- detergent manufacture- advantages of modern detergents .Oxidising bleaches - sunlight with moisture ,air and grass, sodium hypochlorite- sodium perborate-hydrogen peroxide- potassium permanganate- advantages - types- Reducing bleaches-sodium hydrosulphite-sodium bisulphite- precautions necessary during bleaching-sodium dyrosulphite- application of bleach to fabrics-purpose of bleaching- right way to bleach- fabrics to be bleached with chlorine bleach- fabrics not to be bleached with chlorine bleach - laundry blues- ultramarine blue- prussian blue- aniline blue- mechanism of blueing- application of blueing agents to various clothing articles.

Recommended Books

1. E. P.G Gohl& L. D Vilensky -- Textile Science: An Explanation of Fibre Properties.
2. Dr. G. Venkatanarayana -- Engineering Chemistry & Environmental Studies.
3. Telugu Academy -- Intermediate Chemistry, Volume: 1& 2.
4. Intermediate Chemistry, Volume: 1& 2, Vikram Publishers.
5. AnubhaKaushik, CP Kaushik -- Environmental Studies, New Age International Publishers, New Delhi.
6. Noemia D'Souza -- Fabric Care, New Age International Publishers, New Delhi.
7. Bernard P Corbman -- TEXTILES, Fibre to Fabric, Sixth edition, McGraw-Hill International Edition.
8. A.K. De -- Environmental chemistry.
9. K V R Rao -- Environmental Studies, Synergy Centre, Guntur.
10. NCUTE -- Chemical Processing of Textiles, Preparatory Processes and Dyeing, First Edition, 2003, New Delhi.
11. Bureau of Indian Standards- Handbook on Glossary of Textile Terms
12. SujataSaxena and A. S. M. Raja-Natural Dyes: Sources, Chemistry, Application and Sustainability Issues
13. NCERT – Chemistry Books Part 2 class 12th
14. Complete Textile Glossary-celanese acetate.
15. Intermediate Chemistry Vol 1 and 2 – Telugu Academy.
16. Engineering Chemistry- Jain and Jain.
17. Engineering Chemistry- O P Agarwal , Hi Tech.
18. Engineering Chemistry – Sharma.
19. Engineering Chemistry- A K De.
20. Household Textiles and their Care – DurgaDeulakar- Atmaram& Sons, Delhi

Specific Learning outcomes

On completion of the study of the subject, the student will:

1. Fundamentals of Chemistry

- 1.1 Explain the fundamental particles of an atom like electron, proton and neutron etc.
- 1.2 Explain Aufbau's principle and Hund's rule.
- 1.3 State the postulates of Bohr's atomic theory and its limitations.
- 1.4 Define orbital.
- 1.5 Draw the shapes of s, p and d orbitals.

- 1.6 Distinguish between orbit and orbital.
- 1.7 Write electronic configuration of elements up to atomic number 30.
- 1.8 Define chemical bond.
- 1.9 Define and explain chemical bondings viz., ionic, covalent bond with examples.
- 1.10 List the properties of ionic and covalent compounds.
- 1.11 Define the terms – solution – solute and solvent.
- 1.12 Define solubility, unsaturated and supersaturated solutions.
- 1.13 Define Molarity and Normality.
- 1.14 Solve problems on Molarity and Normality.
- 1.15 Explain Arrhenius theory of Acids and Bases.
- 1.16 State the limitations of Arrhenius theory of Acids and Bases.
- 1.17 Define P^H .
- 1.18 Solve problems on P^H (strong acids and bases).

2. Water Technology

- 2.1 State the various sources of water.
- 2.2 Define the terms soft water and hard water with examples.
- 2.3 Explain temporary and permanent hardness of water.
- 2.4 List the usual chemical compounds causing hardness (with formulae)
- 2.5 Define Degree of hardness, units of hardness in ppm(mg/L) and numerical problems related to hardness.
- 2.6 List the disadvantages of using hard water in industries.
- 2.7 Explain municipal treatment of water for drinking purpose.
- 2.8 Define osmosis and reverse osmosis(RO).
- 2.9 List the advantages of RO.

3. Pollution

- 3.1 Define Pollution-, Environment, BOD, COD, Biodiversity, Atmosphere-, contaminant air pollution.
- 3.2 Define Air pollution and explain the natural and manmade causes of air pollution.
- 3.3 Describe the Effects of air pollution on human beings, plants, animals and non – living things.
- 3.4 Explain control of air pollution.
- 3.5 Explain Noise pollution, noise standards, sources of noise pollution- and effects of noise- and measures to control noise pollution.
- 3.6 Define water pollution and explain the causes of water pollution, effects of water pollution and control measures for water pollution.

3.7 Define soil pollution and explain causes- effects control measures for soil pollution.

4. Value Education and Environmental Protection Acts

- 4.1 Describe the value based environmental education – social values, cultural values, global values, spiritual values and thetical values.
- 4.2 Explain the following Acts- Environment protection Acts- constitutional provisions- The Environment Protection Act, 1986- The Air (Prevention and control of Pollution) Act 1981- salient features-Water (Prevention and Control of Pollution) Act 1974- salient features.
- 4.3 Explain the functions of Central Pollution Control Board- The Telangana State Pollution Control Board.

5. Textile Fibers and Chemical Finishes

- 5.1 Define monomer, polymer, polymerization, degree of polymerization.
- 5.2 Explain classification of polymers based on source- - structure- mode of polymerization - - molecular forces- growth polymerization.
- 5.3 Explain requirements of fibre forming polymers.
- 5.4 Explain processing of natural rubber from latex.
- 5.5 Explain addition, condensation polymerization with examples.
- 5.6 Explain the Aims / reasons for applying finishes to fabrics and Describe the process of chemical finishes along with the advantages. – mercerizing- crease resistant finish- creping- fire proof finish- Anti static finish- Anti bacterial finish- Mildew resistant finish- Moth resistant finish- water repellent finish.
- 5.7 State the procedure to distinguishing vegetable fibres from animal fibres with an acid-distinguishing linen from cotton-distinguishing silk from wool-distinguishing rayons from acetate- distinguishing polyester from other fibres.

6. Cleansing Agents and Bleaches:

- 6.1 Define the following terms soap, detergent, saponification and surfactant.
- 6.2 Describe the action of soap.
- 6.3 Explain composition of soap and types of soaps.
- 6.4 Describe the preparation of soap by cold process.
- 6.5 Explain the manufacture of soap by hot process.
- 6.6 State the chemical action of detergents.

- 6.7 Describe detergent manufacture.
- 6.8 List the advantages of modern detergents.
- 6.9 Explain the uses of softeners.
- 6.10 Explain the qualities of good soap.
- 6.11 Explain Oxidising bleaches and reducing bleaches.
- 6.12 List precautions necessary during bleaching.
- 6.13 Explain the process of application of bleach to fabrics.
- 6.14 State the purpose of bleaching.
- 6.15 State the right way to bleach.
- 6.16 List the fabrics to be bleached with chlorine bleach.
- 6.17 State the fabrics not to be bleached with chlorine bleach with reasons.
- 6.18 Describe the use of laundry blues- ultramarine blue- prussian blue- aniline blue.
- 6.19 Write the mechanism of blueing.
- 6.20 Write the application of blueing agents to various clothing articles.

Internal Evaluation

Test	Units	Marks	Pattern
Mid Sem 1	1 and 2	20	Part A 5 Short answer questions Part B 2 Essay questions out of 3 Questions Part C 2 Essay questions out of 3 Questions
Mid Sem 2	3 and 4	20	Part A 5 Short answer questions Part B 2 Essay questions out of 3 Questions Part C 2 Essay questions out of 3 Questions
Slip Test 1	1 and 2	5	2 Essay Questions out of 3 Questions
Slip Test 2	3 and 4	5	2 Essay Questions out of 3 Questions
Assignment	1	5	Different group assignments of Higher order Questions that develop problem solving skills and critical thinking should be given
Seminars	1	5	
	Total	60	

Suggested Student Activities

1. Student visits Library to refer to Manual of Chemistry and Textiles, National and International journals and ASTM standards for Textile testing.
2. Student inspects the available equipment in the Lab to identify the components.
3. Visit nearby Textile and Chemistry Labs to familiarize with fabrication techniques.
4. Technical Quiz.
5. Group discussion.
6. Surprise test.

Suggested E-Learning references

1. www.nptel.as.in
2. www.textilelearner.blogspot.com
3. <https://en.wikipedia.org>
4. www.fibre2fashion.com
5. <http://www.onlinetextileacademy.com>
6. <https://www.slideshare.net>
7. <https://textilechapter.blogspot.com>
8. <https://www.onlinetextileacademy.com>

	Course Outcome	CL	Linked PO	Teaching Hrs.
CO1:	Define fundamental Chemistry concepts and Explain the Principles.	R/U	1,2	8
CO2:	Explain the terms related to Water Hardness and Removal of Temporary and permanent hardness of water.	R/U/A	1,2	12
CO3:	Explain the causes and remedies for air, noise, Water and Soil.	R/U	1,2	8
CO4:	Explain the importance of value education and environmental protection Acts.	R/U/A	1,2	8
CO5:	Explain different polymers, identification of fibers textile finishes.	R/U	1,2	12
CO6:	Evaluate the need and process to use cleaning agents, bleaches and laundry blues.	R/U/A	1,2	12

CO-PO Mapping Matrix

Internal Evaluation

Test	Units	Marks	Pattern
Mid Sem 1	1 and 2	20	Part A 5 Short answer questions. Part B 2 Essay questions out of 3 Questions. Part C 2 Essay Questions out of 3 Questions.
Mid Sem 2	3 and 4	20	Part A 5 Short answer questions. Part B 2 Essay questions out of 3 Questions. Part C 2 Essay Questions out of 3 Questions.
Slip Test 1	1 and 2	5	2 Essay Questions out of 3 Questions.
Slip Test 2	3 and 4	5	2 Essay Questions out of 3 Questions.
Assignment	1	5	Different group assignments of Higher order Questions that develop problem solving skills and critical thinking should be given.
Seminars	1	5	
	Total	60	

Semester End Examination marks distribution

	Short answer	Essay	Marks
Part A	10	0	20
Part B	0	4/6	20
Part C		4/6	40
Total	10	8/12	80

Midterm Examination marks distribution

	Short answer	Essay	Marks
Part A	5	0	10
Part B	0	2/3	10
Part C	0	2/3	20
Total	5	4/6	40

Mid Semester Internal Evaluation - 1

Model Paper

Name of the Course : C18- GT I Semester

Code& Name the Subject : C18GT-102F, Textile Chemistry and Environmental Studies

Duration: 90 Min

Max Marks: 40

Part- A

Answer all questions and each question carries 2 marks.

5×2 = 10

1. Define ionic bond.
2. Define covalent bond
3. State the term molarity.
4. State the term Hard water.
5. define the Term hard water.

Part- B

Answer any two questions and each question carries 5 marks.

2×5 = 10

6. Explain Hunds rule.
7. Explain Aufbau principle.
8. Write the disadvantages of hard water.

Part- C

Answer any two questions and each question carries 10 marks.

2×10 = 20

9. Explain the Arrhenius theory of acids and bases.
10. Explain the electronic configuration.
11. Explain the municipal water treatment.

2ndMid Semester Internal Evaluation - 2

Model Paper

Name of the Course : C18- GT I Semester

Code& Name the Subject : C18GT-102F, Textile Chemistry and Environmental Studies

Duration: 90 Min

Max Marks: 40

Part- A

Answer all questions and each question carries 2 marks

5×2 = 10

1. Define pollution.
2. Define the term environment.
3. State the term BOD.
4. State any two salient features of environment protection Acts.
5. State the value education given in schools for environment protection.

Part- B

Answer any two questions and each question carries 5 marks.

2×5 = 10

6. What are the ill effects of noise pollution.
7. Suggest measures to avoid pollution of drinking water in cities.
8. Explain the role of thetical values in value education.

Part- C

Answer any two questions and each question carries 10 marks.

2×10 = 20

9. Explain the reasons for increased cases of respiratory infections in traffic police.
10. Explain the Major causes of noise pollution in Hyderabad.
11. How does value education help in combating pollution?

Semester End Examination Model Question paper

Name of the Course : C18- GT I Semester

Code& Name the Subject : C18GT-102F, Textile Chemistry and Environmental Studies

Duration: 180 Min

Max Marks: 80

Part A

Answer all questions and each question carries two marks

10 X2 = 20

1. Define ionic bond.
2. List the chemicals which cause temporary hardness in water.
3. Define Hard water.
4. State two reasons for air pollution.
5. State the reasons for noise pollution.
6. Define polymer.
7. State the term monomer.
8. State the term polymer.
9. State the reasons for applying blue to garments
10. Define soap.

PartB

GROUP-1 ANSWER ANY TWO QUESTIONS

2x5=10

11. Explain Hund's rule.
12. Explain Aufbau principle.
13. Write the causes for noise pollution.

GROUP-2 ANSWER ANY TWO QUESTIONS

2x5=10

14. Explain the test to distinguish between distinguishing polyester from other fibres.
15. Explain the role of sunlight and air as natural source of bleaching.
16. Write the qualities of good soap.

PartC

GROUP-1 ANSWER ANY TWO QUESTIONS

2x10=20

17. How do we soften permanent hardness of water by zeolite process.
18. Evaluate the causes for soil pollution.
19. Explain any one Act framed for environment protection.

GROUP-2 ANSWER ANY TWO QUESTIONS

2x10=20

20. Describe the longitudinal and cross sectional microscopic appearance of any four textile fibres.
21. Describe the burning reactions of cotton fibre.
22. Explain the preparation of soap by cold process.

Department of Technical Education

State Board of Technical Education & Training (TS)

Course Title	Natural Textile Fibres	Course Code	18GT-103C
Semester	I	Course Group	Core
Teaching Scheme in Hrs(L:T:P)	2.4:1.6:0	Credits	3
Methodology	Lecture + Tutorials	Total Contact Hours	45Hrs/60Pds
CIE	60 Marks	SEE	40 Marks

Course Content and Blue Print of Marks for SEE

Unit No	Unit name	Periods	Questions for SEE			Marks weightage	Weightage (%)
			R	U	A		
1.	Primary and secondary properties of Textile fibres	8	2	0	1	14	12.7
2	Cotton	12	1	1	1	17	15.4
3	Flax (Linen)	8	1	-	1	12	11
4.	Pine Apple Fibre	6	1	2	0	12	11
5.	Wool and Silk Fibre	14	1	2	2	32	29
6.	Jute and other Natural Fibre	12	4	1	1	23	21
	Total	60	10	6	6	110	100

Prerequisites

The basic requisites for this course are basic knowledge of science acquired at secondary school level.

Course Content

Course outcomes	
CO1	Explain the textile concepts and properties of natural textile fibres.
CO2	Analyze the machinery used in cultivation manufacturing process, and properties of cotton fibres.
CO3	Explain the process of making flax and properties of flax.
CO4	Explain the manufacturing and properties of pine apple fibre.
CO5	Explain the manufacturing and properties of wool and silk.
CO6	Evaluate the salient features of the manufacturing process, properties and end uses of jute salient features of, hemp, ramie specialty and fur fibres

COURSE CONTENT:

UNIT 1: Primary and secondary properties of Textile fibres: Duration: 8 Periods (L:4.8-T:3.2)

Definition of textile fibre- textile- lea- hank- Classification of natural textile fibres based on origin- Staple fibre- filament fibre- cellulosic fibres- seed hair fibres- bastfibres- leaf fibres- nut husk fibres- protein fibres- animal hair fibres- animal secretions- mineral fibre- Primary/essential properties of textile fibres- High length to width ratio - tenacity- flexibility- spinning quality(cohesiveness)- uniformity- secondary properties- physical shape- density- luster- colour- moisture regain- moisture absorption- elastic recovery and elongation- resiliency- flammability- thermal reactions- reaction to acids - alkalies-organic solvents-fibre properties involved in the performance of fabric.-additional properties- abrasion resistance

UNIT 2: Cotton: Duration: 12 Periods (L:7.2-T:4.8)

Composition of cotton- kinds and types of cotton- upland cotton- Egyptian cotton- Asiatic cotton- Process of making cotton yarn - From field to mill- cultivating cotton- Harvesting- Ginning and baling -Blending , opening and cleaning-carding- doubling- combing- drawing-roving- spinning- cotton fibre properties- cotton fabric properties- strength-effect of light- elasticity- resilience- drapability- heat conductivity- absorbency- - reaction to

bleaches-shrinkage- - - resistance to mildew- resistance to insects- reaction to alkalies- reaction to acids- affinity for dyes- absorbency- cleanliness and wash ability - effect of heat- effect of light- resistance to perspiration - uses of Byproducts of cotton- cotton linters- hulls- inner seeds- - uses of cotton

UNIT 3: Flax /Linen :

Duration: 8 Periods (L:4.8-T:3.2)

Flax cultivation- harvesting-preparation of the fibre- dew retting- pool or dam retting- stream retting- vat or mechanical retting- chemical retting-manufacturing process- breaking- scutching- hackling- spinning- dry spinning- general applications of linen fabrics- properties of linen fabrics- strength- elasticity- resilience - drapability- heat conductivity- absorbency- cleanliness and washability-reaction to bleaches- shrinkage- effect of heat- effect of light- resistance to mildew- resistance to insects- reaction to alkalies- reaction to acids- affinity for dyes- resistance to perspiration- - properties of flax fibre- shape- strength- luster- tenacity- elastic recovery- elongation- resiliency- density- moisture regain- dimensional stability-resistance to acids- alkalies- organic solvents- sunlight- - insects- thermal reactions to heat and flame uses and care of linen fabrics- effect of microorganisms- - uses of linen fabric- advantages of flax fabric .

UNIT 4: Pineapple fibre:

Duration: 6 Periods (L: 3.6-T: 2.4)

Extraction of pine apple fibre- process of making pine apple fibre- properties of pineapple fibre- uses.

UNIT 5: Wool and Silk:

Duration: 14 Periods (L:8.4-T:5.6)

Classifications for wool- classification by sheep- merino wool- class two wools- class three wools-class four wools-classification by fleece- lamb's wool- hogget wool- wether wool- pulled wool- dead wool- cotty wool- taglocks- manufacturing process- preparation- sorting and grading- garning- scouring- drying- oiling- dyeing- blending- carding- gilling and combing- drawing- roving- spinning- differences between woolen and worsted fabrics- manufacturing of worsted yarn -properties of wool fabrics- strength- elasticity- resiliency-drapability- heat conductivity-absorbency - reaction to bleaches- shrinkage- effect of heat- effect of light- resistance to mildew- reaction to alkalies- acids- affinity to dyes- resistance to perspiration- properties of wool fibre- luster- tenacity- wet- dry- elastic recovery- elongation- dry- wet- resiliency- density- moisture regain- dimensional stability- resistance to acids- alkalies- sunlight- - thermal reaction to heat - flame. **Silk:**Sericulture- cultivation of cocoons- filature operations- sorting cocoons- softening the sericin- reeling the filament- throwing- tram silk- singles- organzine - life cycle of silkworm- properties of silk fabric- strength- elasticity-resilience- drapability-heat conductivity-absorbency-reaction to bleaches- shrinkage-effect of heat- effect of light- resistance to mildew- resistance to insects- reaction to alkalies-reaction to acids- affinity for dyes- resistance to perspiration -- cleanliness and washability - microorganisms- insects - uses of wool and silk types of silk

6.0 Jute and other Natural Textile Fibres

Duration: 12 Periods (L:7.2-T:4.8)

Manufacturing of jute- Properties -luster- tenacity-elastic recovery-elongation- resiliency-density-moisture absorption-dimensional stability-resistance to acids-alkalis-sunlight-microorganisms-insects-thermal reactions- to heat-to flame- - uses of jute- uses of Sisal - uses of Coir- properties and uses of Hemp-uses of kapok-salient features and uses of Ramie- uses of Alpaca- uses of Fur fibres-- uses of Asbestos- uses of camel hair - properies and uses of mohair.

Recommended Books

- | | | |
|--|---|---------------------------------------|
| 1. Textile Fibres | - | Garden & Cook |
| 2. A text book of Fibre Science and Technology | - | S.P. Mishra. |
| 3. Textiles | - | Sara J Kadolph - Pearson Publications |
| 4. Textile fibre to Fabric | - | Corbman- McGraw Hill- singapore |

Specific Learning Outcomes:

1. Primary and secondary properties of Textile fibres

- 1.1 Define Textile.
- 1.2 Define Textile fibre.
- 1.3 Classification of Natural Textile fibres.
- 1.4 Give examples for seed hair fibres.
- 1.5 Give examples for bastfibres.
- 1.6 Give examples for leaf fibres.
- 1.7 Give examples for nut husk fibres.
- 1.8 Give examples for animal hair fibres.
- 1.9 Give examples for specialty hair fibres.
- 1.10 Give examples for animal secretions.
- 1.11 Give examples for mineral fibres.
- 1.12 List primary properties of textile fibres.
- 1.13 Define High length to width ratio.
- 1.14 Define tenacity.
- 1.15 Define flexibility.
- 1.16 Define spinning quality.
- 1.17 Define uniformity.

- 1.18 Explain secondary properties of textile fibres like physical shape, density, luster, colour, moisture regain and moisture absorption. Moisture regains elastic recovery and elongation, resiliency, flammability, thermal reactions.

2. Cotton

- 2.1 State the composition of cotton.
- 2.2 Explain kinds and types of cotton.
- 2.3 Explain cultivation of cotton.
- 2.4 Explain harvesting of cotton.
- 2.5 Explain ginning and baling of cotton.
- 2.6 List the by products of cotton.
- 2.7 Describe the manufacturing operations in the making of cotton yarn.
- 2.8 Describe the blending, opening and cleaning process in the making of cotton yarn.
- 2.9 Describe the carding operation.
- 2.10 Describe the doubling and combing process.
- 2.11 Describe drawing and roving process in the making of cotton yarn.
- 2.12 Describe the spinning process of cotton yarn.
- 2.13 Explain the properties of cotton fibre.
- 2.14 Explain the properties of cotton fabric.

3. Flax/Linen

- 3.1 Explain cultivation of flax plant.
- 3.2 Explain harvesting of flax plant.
- 3.3 Describe the preparation of flax fibre.
- 3.4 Define dew retting.
- 3.5 List the advantages of dew retting.
- 3.6 Define Dam retting.
- 3.7 List the advantages of stream retting.
- 3.8 Explain Vator mechanical retting.
- 3.9 Explain chemical retting.
- 3.10 Explain the manufacturing process of flax fibre- breaking- scutching- hackling- spinning.
- 3.11 List the general applications of linen fibre/flax fibre.
- 3.12 Describe properties of linen fabric.

4. Pineapple fibre

4.1 Explain the process of making pine apple fibre and properties of pine apple yarn , advantages and uses .

5. Wool and Silk fibre

5.1 Explain classifications wool- by sheep- merino wool- class two wools- class three wools-class four wools.

5.2 Explain classification by fleece- lamb'swool, hogget wool, wetherwool, pulledwool, dead wool, cotty wool and taglocks.

5.3 Explain the manufacturing process of wool - preparation, sorting and grading, garnetting, scouring, drying, oiling, dyeing, blending, carding, gilling and combing, drawing, roving and spinning.

5.4 Explain the differences between woolen and worsted fabrics.

5.5 Explain the properties of wool fabrics.

5.6 Define sericulture.

5.7 Explain cultivation of cocoons, filature operations, sorting cocoons, softening the sericin and reeling the filament.

5.8 Explain throwing- tram silk- singles- organzine.

5.9 Describe the life cycle of silkworm.

5.10 Describe the properties of silk fabric.

6. Jute and other Natural Fibres

6.1 Explain the extraction of jute fibre.

6.2 Describe the properties of jute fibre.

6.3 List the uses of jute fibre.

6.4 Explain the salient features of hemp production uses and properties of hemp.

6.5 Explain the salient features of ramie and uses of ramie.

6.6 Explain the properties and uses of mohair.

6.7 Explain the uses of coir.

6.8 Explain the uses of kapok.

6.9 Explain the uses of asbestos.

6.10 State the uses of sisal.

6.11 Explain the sources of fur fibre and applications of fur.

6.12 State the uses of camel hair.

Internal Evaluation

Test	Units	Marks	Pattern
Mid Sem 1	1 and 2	20	Part A 5 Short answer questions Part B 2 Essay questions out of 3 Questions Part C 2 Essay questions out of 3 Questions
Mid Sem 2	3 and 4	20	Part A 5 Short answer questions Part B 2 Essay questions out of 3 Questions Part C 2 Essay questions out of 3 Questions
Slip Test 1	1 and 2	5	2 Essay Questions out of 3 Questions
Slip Test 2	3 and 4	5	2 Essay Questions out of 3 Questions
Assignment	1	5	Different group assignments of Higher order Questions that develop problem solving skills and critical thinking should be given
Seminars	1	5	
	Total	60	

Suggested Student Activities

1. Industrial Visit to see the machines in working condition.
2. Technical Quiz.
3. Group discussion.
4. Student visits Library to refer the National and International Journals.
5. Students visit the Library to refer ASTM standards for textile testing.
6. Student inspects the available equipment in the Lab to identify the parts.
7. Surprise test.

Suggested E-Learning references

1. www.nptel.as.in
2. www.textilelearner.blogspot.com
3. <https://en.wikipedia.org>
4. www.fibre2fashion.com
5. <http://www.onlinetextileacademy.com>
6. <https://www.slideshare.net>
7. <https://textilechapter.blogspot.com>
8. <https://www.onlinetextileacademy.com>

CO-PO Mapping Matrix

Course outcomes		CL	Linked PO	Teaching Hours
CO1	Explain the textile concepts and classification of natural textile fibres.	R/U/A	1, 2,	8
CO2	Analyze the machinery used in cultivation manufacturing process, and properties of cotton fibres.	U/A	2,3	12
CO3	Explain the process of making flax and properties,uses of flax	R/U	2	8
CO4	Explain the manufacturing uses ,and properties of pine apple fibre.	R/U	2,	6
CO5	Explain the types, uses, manufacturing and properties of wool and silk.	R/U	2	14
CO6	Evaluate fibre manufacturing process, properties, uses, advantages of jute and other minor natural fibres.	R/U/A	2, 6, 10	14
				60

Internal Evaluation

Test	Units	Marks	Pattern
Mid Sem 1	1 and 2	20	Part A 5 Short answer questions Part B 2 Essay questions out of 3 Questions Part C 2 Essay Questions out of 3 Questions
Mid Sem 2	3 and 4	20	Part A 5 Short answer questions Part B 2 Essay questions out of 3 Questions Part C 2 Essay Questions out of 3 Questions
Slip Test 1	1 and 2	5	2 Essay Questions out of 3 Questions
Slip Test 2	3 and 4	5	2 Essay Questions out of 3 Questions
Assignment	1	5	Different group assignments of Higher order Questions that develop problem solving skills and critical thinking should be given
Seminars	1	5	
	Total	60	

Semester End Examination marks distribution

	Short Answer	Essay	Marks
Part A	10	0	20
Part B	0	4/6	20
Part C	0	4/6	40
Total	10	8/12	80

Midterm Examination marks distribution

	Short answer	Essay	Marks
Part A	5	0	10
Part B	0	2/3	10
Part C	0	2/3	20
Total	5	4/6	40

Model Question papers**Mid Semester Internal Evaluation - 1**

Model Paper

Name of the Course : C18- GT I Semester

Code & Name the Subject : C18GT-103C, Natural Textile Fibres

Duration: 90 Min

Max Marks: 40

Part- A

Answer all questions, each question carry 2 marks

5×2 = 10

1. Define the term Textile.
2. Define the term Uniformity.
3. Define the term Staple fibre.
4. State the important feature of upland cotton.
5. State the term ginning.

Part- B

Answer any two questions, each question carry 5 marks.

2×5 = 10

6. Explain the cultivation parameters for cotton.
7. Explain the process of opening and blending cotton.
8. Write two secondary properties of fibres.

Part- C

Answer any two questions, each question carry 10 marks.

2×10 = 20

9. Explain any three primary properties which are essential in the performance of the fabric.
10. Explain the changes brought about in cotton by combing process.
11. Explain any three properties of cotton fabric which makes them suitable for hot climate.

Name of the Course : C18- GT I Semester

Code & Name the Subject : C18GT-103C, Natural Textile Fibres

Duration: 90 Min

Max Marks: 40

Part- A

Answer all questions, each question carry 2 marks

5×2 = 10

1. State the climatic conditions suitable for flax cultivation.
2. Define the term retting.
3. State the disadvantage of chemical retting.
4. State the strength property of pineapple fibre.
5. List two advantages of pineapple fibre.

Part- B

Answer any two questions, each question carry 5 marks.

2×5 = 10

6. Explain the spinning process adopted for flax fibre
7. Explain the uses of pine apple fibre
8. Write the resilience property and effect of acids on pineapple fibre.

Part- C

Answer any two questions, each question carry 10 marks.

2×10 = 20

9. Explain the effect of heat on flax fibre.
10. Explain the effect of light and acids on flax fibre.
11. Explain the following properties of pineapple fibre- elasticity, resilience and effect of acids.

Semester End Examination Model Question paper

Name of the Course : C18- GT I Semester

Code & Name the Subject : C18GT-103C, Natural Textile Fibres

PART A 10 X2 = 20 Marks

Answer all questions and each question carries two marks

1. Define Textile Fiber
2. List secondary properties of textile fibres.
3. State the features of upland cotton.
4. State the strength property of linen fibre.
5. State the strength property of pineapple fibre.
6. Define pulled wool.
7. State the strength property of jute fibre.
8. State the climate suitable for jute cultivation.
9. State two uses of camel hair fibre.
10. State the source of alpaca fibre and the place for which it is famous

Part-B

GROUP-1 **ANSWER ANY TWO QUESTIONS** **2x5=10**

11. Write the changes incurred in cotton after carding process.
12. Write the spinning process used in making pine apple fibre
13. Write the extraction process followed for pine apple fibre.

GROUP-2 **ANSWER ANY TWO QUESTIONS** **2x5=10**

14. Explain the stiffling process.
15. Explain the three properties of worsted fabric.
16. Explain the spinning of jute.

Part-C

GROUP-1 **ANSWER ANY TWO QUESTIONS** **2x10=20**

17. How do secondary properties influence the selection of textile fibres?
18. Why should cotton be used for climatic conditions in Hyderabad?
19. How is linen fabric superior to cotton fabric?

GROUP-2 **ANSWER ANY TWO QUESTIONS** **2x10=20**

20. Why is wool fibre preferred in blazer cloth?
21. What are the reasons for Hyderabad not being a famous centre for producing world best quality wool?
22. What are the applications for which jute fibre can be used?

Department of Technical Education**State Board of Technical Education & Training (TS)**

Course Title	Man-made Textile Fibres	Course Code	18GT-104C
Semester	I	Course Group	Core
Teaching Scheme in Hrs(L:T:P)	2.4:1.6:0	Credits	3
Methodology	Lecture + Tutorial	Total Contact Hours	45Hrs/60Pds
CIE	60 Marks	SEE	40 Marks

Course Content and Blue Print of Marks for SEE

Unit No	Unit name	Periods	Questions for SEE			Marks weightage	%Weightage
			R	U	A		
1.	Man-made Textile Fibres Classification and spinning methods	8	1	1	-	7	6.4
2	Acrylic, Modacrylic	8	1		1	12	10.9
3	Manmade Mineral Fibres	8	2	-	1	14	12.7
4.	Elastomeric Fibres and olefin fibres	12	1	2	1	22	20
5.	Rayon and Acetates	12	3	2	1	26	23.6
6.	Polyester and Nylon	12	2	1	2	29	26.3
	Total	60	10	6	6	110	100

Prerequisites:

This Course requires basic science knowledge acquired in school education.

Course outcomes

Course outcomes	
CO1	Explain the spinning processes used for synthetic fibre production and classify synthetic /man made textile fibres
CO2	Explain the properties, uses, manufacturing process and difference between acrylic and modacrylic.
CO3	Explain the uses ,manufacturing and properties of manmade mineral fibres
CO4	Explain the manufacturing process, properties and uses of elastomeric and olefin fibres
CO5	Describe the properties, uses, manufacturing process of different types of rayon, acetates
CO6	Explain the manufacturing process and properties of nylon and polyester.

COURSE CONTENT:

UNIT 1: Man-made Textile Fibres Classification: Duration: 8 Periods (L:4.8 – T:3.2)

man-made cellulosic fibres- man-made modified cellulosic fibers- man-made protein fibres- man-made non-cellulosic fibres- man-made mineral fibres. Spinning methods- melt spinning- Dry spinning- wet spinning.

UNIT 2: Acrylic and Mod acrylic:

Duration: 8 Periods (L:4.8 – T:3.2)

Production and molecular structure- fibre properties- luster- strength- elongation- elastic recovery- resilience- drapability- heat conductivity- absorbency- cleanliness and washability-effect of bleaches- shrinkage- effect of heat- effect of light- density- moisture regain- dimensional stability- effect of alkalies- acids- sunlight- age- mildew- resistance to insects- affinity for dyes-resistance to perspiration.

UNIT 3: Man-made Mineral fibres:

Duration: 8 Periods (L:4.8 – T:3.2)

Manufacturing process of glass fibre- continuous filament process- staple fibre process-properties- strength- elasticity- resilience- drapability- heat conductivity- absorbency- cleanliness and washability-effect of light- resistance to mildew-affinity for dyes-resistance to perspiration- shrinkage- reaction to alkalies- acids- bleaches-- absorbency - effect of heat- resistance to insects - resistance to mildew- resistance to insects

UNIT 4 Elastomeric and Olefin fibres:

Duration: 12 Periods (L:7.2 – T:4.8)

Rubber- manufacturing of rubber - spandex - method of manufacture- spinning the fibre- properties- strength- elasticity- resilience- drapability- heat conductivity- absorbency- cleanliness and washability- effect of bleaches- shrinkage- reaction to alkalies- reaction to acids-resistance to perspiration - effect of heat- affinity to dyes - effect of heat-shrinkage- light- resistance to mildew - insects-affinity for dyes- olefin fibres- polypropylene production and properties - uses of elastomeric and olefin fibres.

UNIT 5: Rayon and acetate:

Duration: 12 Periods (L:7.2 – T:4.8)

Raw materials used in making viscose rayon- chemicals used in making viscose rayon - manufacturing process of viscose rayon- high wet modulus rayon -properties of rayon fibre- luster- strength- resilience- drapability- heat conductivity- absorbency-cleanliness and washability- resistance to perspiration- affinity for dyes- resistance to insects-elasticity- elastic recovery- density- moisture regain- resistance to acids- alkalies- sunlight- microorganisms- insects-shrinkage- reaction to bleaches-effect of heat- effect of light-resistance to mildew **Acetate and Triacetate Acetate:** Manufacture of acetate and triacetate- and properties as mentioned above.

UNIT 6: Polyester and Nylon:

Duration: 12 Periods (L:7.2 – T:4.8)

Manufacturing and properties of polyester and nylon 6,6 nylon 6 - luster- strength- elasticity- absorbency - resilience- drapability- elastic recovery- elongation- resiliency- density- thermal properties- moisture regain- dimensional stability- effect of alkalies- acids- organic solvents- sunlight- age- micro organisms-static charge- use and care - -elasticity-heat conductivity-absorbency-cleanliness and washability-effect of bleaches-shrinkage- effect of heat- effect of light- resistance to mildew- resistance to insects-resistance to alkalies - reaction to acids-affinity to dyes- resistance to perspiration- advantages of polyester and nylon

Recommended Books

- 1 Textiles - Sara J Kadolph- Pearson.
- 2 Textiles Fiber to Fabric- Bernard P CORBMAN.
- 3 Introductory Textile Science- Marjory L Joseph- Holt, Rinehart and Winston - New York.

Specific Learning outcomes

1. Man-made Textile Fibres Classification:

- 1.1 Explain classification of man-made fibres.
- 1.2 Describe the three spinning processes - wet spinning, dry spinning and melt spinning.
- 1.3 Give examples for man-made cellulosic fibres, modified cellulosic fibres, protein fibres.
- 1.4 Give examples for man-made noncellulosic fibers.
- 1.5 Give examples for man-made mineral fibres.
- 1.6 Explain wet spinning process.
- 1.7 Explain dry spinning process.
- 1.8 Explain melt spinning.

2. Acrylic and Modacrylic:

- 2.1 Explain the properties of acrylic and modacrylic fabrics.
Explain the process of making acrylic and modacrylic and uses

3. Man-made mineral fibres:

- 3.1 Give examples for man-made mineral fibres.
Explain the properties of glass fibre and manufacturing process and uses.

4. Elastomeric fibres and Olefin Fibres

- 4.1 Explain the process of manufacturing and properties of spandex.
- 4.2 Explain the properties and uses of elastomeric fibres and Olefin Fibres

5. Rayon and Acetates

- 5.1 List the chemicals used in making of viscose rayon.
- 5.2 Explain the process of making viscose rayon , high wet modulus rayon
- 5.3 Explain the process of making cellulose acetate and triacetate.
- 5.4 Explain the properties of viscose rayon, cellulose acetate and triacetate.

6 Polyester and Nylon

- 6.1 Explain the manufacturing process, properties, uses and advantages of polyester, nylon 6,6 and nylon6.

Internal Evaluation

Test	Units	Marks	Pattern
Mid Sem 1	1 and 2	20	Part A 5 Short answer questions Part B 2 Essay questions out of 3 Questions Part C 2 Essay questions out of 3 Questions
Mid Sem 2	3 and 4	20	Part A 5 Short answer questions Part B 2 Essay questions out of 3 Questions Part C 2 Essay questions out of 3 Questions
Slip Test 1	1 and 2	5	2 Essay Questions out of 3 Questions
Slip Test 2	3 and 4	5	2 Essay Questions out of 3 Questions
Assignment	1	5	Different group assignments of Higher order Questions that develop problem solving skills and critical thinking should be given
Seminars	1	5	
	Total	60	

Suggested Student Activities

1. Industrial Visit to see the machines in working condition
2. Technical Quiz
3. Group discussion
4. Student visits Library to refer the National and International Journals
5. Students visit the Library to refer ASTM standards for textile testing
6. Student inspects the available equipment in the Lab to identify the parts
7. Surprise test

Suggested E-Learning references

1. www.nptel.as.in
2. www.textilelearner.blogspot.com
3. <https://en.wikipedia.org>
4. www.fibre2fashion.com
5. <http://www.onlinetextileacademy.com>
6. <https://www.slideshare.net>
7. <https://textilechapter.blogspot.com>
8. <https://www.onlinetextileacademy.com>
9. <https://www.youtube.com/watch?v=S4lhDwFxdtk>
10. <https://www.youtube.com/watch?v=EdJSUd71CdI>
11. <https://www.youtube.com/watch?v=U68FvwHaOoE>
12. <https://www.youtube.com/watch?v=EZfb6Rpq3yc>
13. <https://www.youtube.com/watch?v=LRPne5Qa04g>
14. <https://www.youtube.com/watch?v=Oc3jOfpgvOU>

CO-PO Mapping Matrix

Course outcomes		CL	Linked PO	Teaching Hours
CO1	Explain the spinning processes used for synthetic fibre production and classify synthetic textile fibres .	R/U	2	8
CO2	Explain the properties, uses, manufacturing process and difference between acrylic and modacrylic .	R/U/A	2	8
CO3	Explain the uses manufacturing and properties of manmade mineral fibres	R/U/A	2	8
CO4	Explain the properties and uses of elastomeric and olefin fibres	R/U/A	2	12
CO5	Describe the properties, uses, manufacturing process of different types of rayon, cellulose acetate and	R/U/A	2	12

	triacetate			
CO6	Evaluate the process of making polyester, nylon, their properties and uses.	R/U/A	2,10	12

Semester End Examination marks distribution

	Short answer	Essay	Marks
Part A	10	0	20
Part B	0	4/6	20
Part C		4/6	40
Total	10	8/12	80

Midterm Examination marks distribution

	Short answer	Essay	Marks
Part A	5	0	10
Part B	0	2/3	10
Part C	0	2/3	20
Total	5	4/6	40

Model Question papers

Mid Semester Internal Evaluation - 1

Model Paper

Name of the Course : C18- GT I Semester

Code & Name the Subject : C18GT-104C, Man-made Textile Fibres

Duration: 90 Min

Max Marks: 40

Part- A

Answer all questions, each question carries 2 marks

5×2 = 10

1. Define the term synthetic fibre..
2. Give examples for man-made protein fibre..
3. Give examples for man-made non-cellulosic fibres.
4. State the chemical composition of acrylic fibre.
5. State the tenacity of acrylic fibre.

Part- B

Answer any two questions, each question carry 5 marks.

2×5 = 10

6. Explain the melt spinning process.
7. Explain the effect of acids and alkalies on acrylic.
8. Write the effect of mildew and micro organisms on acrylic.

Part- C

Answer any two questions, each question carry 10 marks.

2×10 = 20

9. Explain the manufacturing process of acrylic.
10. Explain the effect of bleaches, perspiration and absorbency property of acrylic
11. Explain the elasticity, drapability and resiliency property of acrylic.

2nd Mid Semester Internal Evaluation - 2

Model Paper

Name of the Course : C18- GT I Semester

Code & Name the Subject : C18GT-104C, Man-made Textile Fibres

Duration: 90 Min

Max Marks: 40

Part- A

Answer all questions, each question carry 2 marks

5×2 = 10

1. State two raw materials used in making of mineral fibres
2. List two uses of glass fibre
3. State two uses of spandex.
4. List two examples for olefin fibres
5. State the resiliency property of spandex.

Part- B

Answer any two questions, each question carry 5 marks.

2×5 = 10

6. Explain the spinning process adopted for flax fibre
7. Explain the uses of pine apple fibre
8. Write the resilience property and effect of acids on pineapple fibre.

Part- C

Answer any two questions, each question carry 10 marks.

2×10 = 20

9. Explain the effect of heat and light on glass fibre.
10. Explain the manufacturing of rubber.
11. Explain the cleanliness and washability and effect of bleach on spandex.

Semester End Examination Model Question paper

Name of the Course : C18- GT I Semester

Code & Name the Subject : C18GT-104C, Man-made Textile Fibres

Duration: 180 Min

Max Marks: 80

PART A 10 X2 = 20 Marks

Answer all questions and each question carries two marks

1. List two man-made protein fibres.
2. State the elastic recovery of acrylic.
3. State the uses of glass fibre.
4. State the effect of perspiration on glass fibre.
5. State the strength property of polypropylene fibre.
6. Define regenerated fibres.
7. State the strength property of cellulose acetate.
8. State the uses of cellulose acetate.
9. State the raw materials used in nylon preparation.
10. State the uses of polyester fabric.

Part-B

GROUP-1 **ANSWER ANY TWO QUESTIONS** **2x5=10**

11. Write the melt spinning process.
12. Write the spinning process used in making polypropylene
13. Write the effect of heat and light on polypropylene.

GROUP-2 **ANSWER ANY TWO QUESTIONS** **2x5=10**

14. Explain the absorbency and affinity exhibited by viscose rayon to dyes.
15. Explain the strength and shrinkage property of viscose rayon.
16. Explain the thermal properties of polyester.

Part-C

GROUP-1 **ANSWER ANY TWO QUESTIONS** **2x10=20**

17. Describe the conversion of chemical into acrylic fibre.
18. What are outstanding properties of glass fibre which makes it suitable for the designed end uses .
19. Explain the chemical properties of polypropylene.

GROUP-2

ANSWER ANY TWO QUESTIONS

2x10=20

20. How is triacetate different from viscose rayon.
21. What are the applications for which nylon can be used. Justify correlating with properties.
22. Explain the process of making polyester.

Department of Technical Education**State Board of Technical Education & Training (TS)**

Course Title	Basic Sewing Technology	Course Code	18GT-105F
Semester	I	Course Group	Foundation
Teaching Scheme in Hrs(L:T:P)	2.4:1.6:0	Credits	3
Methodology	Lecture + Tutorials	Total Contact Hours	45Hrs/60Pds
CIE	60 Marks	SEE	40 Marks

Course Content and Blue Print of Marks for SEE

Unit No	Unit name	Periods	Questions for SEE			Marks weightage	%Weightage
			R	U	A		
1.	Tools and Equipment	8	1	1	1	17	15.5
2	Anthropometric measurements	6	1	-	1	12	10.9
3	Preparation of Fabric for cutting and Sewing terminology	6	2	1	0	9	8.1
4.	Basic Stitches and Seams	12	1	1	1	17	15.5
5.	Fullness and Closures	14	3	1	2	31	28.2
6.	Facings and Apparel Terminology	14	2	2	1	24	21.8
	Total	60	10	6	6	110	100

Pre-Requisites

This course requires the basic knowledge of Basic science and Mathematics at Secondary school level .

Course Outcome

CO1	Explain the use of tools and equipment for sewing work.
CO2	Explain the process of taking and recording body measurements manually and by computerized method for different garments
CO3	Adapt the fabric preparation process based on fabric type and ascertain the appropriate sewing terms to use.
CO4	Explain the process of making stitches and seams Manually/with machine and their right choice based on fabric garment and trend.
CO5	Explain the process of making fullness, closures and predict the appropriate closures to use.

CO6	Evaluate the facings to be applied for finishing different raw edges and explain the apparels listed.
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COURSE CONTENT

Unit 1: Tools and Equipment:

Duration: 08 periods (L: 4.8-T: 3.2)

Cutting tools- dress makers shears- scissors- pinking scissors- buttonhole scissors- ripping scissors-thread clips- electric scissors- scissor cutting gauge- cutting board- measuring tools- tape measure- yard stick- rulers- skirt marker- marking tools- tracing wheel- dress makers carbon- tailors chalk- tailors wax- tailor tacker-general tools - pins- needle threader- thimble- pin cushion- emery bag- bodkin- stilleto- French curve- mirror- embroidery frame- emery bag pressing equipment- iron- ironing board- ironing board pad and curve- press cloths- sponge- press mitt- tailors ham- seam roll- wooden clapper- point pressure-needle board. Equipment - domestic model sewing machine- straight stitch, zigzag machines, semi-automatic machine, automatic and super automatic machine industrial model single needle lock stitch sewing machine- parts of sewing machine- functions of different parts of sewing machine- features of domestic model sewing machine and industrial model single needle lock stitch sewing machine-Care and maintenance of sewing machine- features of sewing machine to consider- selection of needle and threads based on fabric type. Sewing machine troubles and remedies - breaking of needles- breaking of bobbin thread- skipping of stitches- puckered seams - loop stitch- missing stitch- fabric puckering- machine running heavily- TANGLED THREAD at the beginning- material not feeding correctly- uneven stitch length.

UNIT 2: Anthropometric Measurements

Duration: 6 periods(L:3.6-T:2.4)

Definition of anthropometry-- basic land marks- precautions while taking body measurements-computerized body measuring systems- taking of dress form measurements- recording of measurements for garments like skirt of different lengths- frock- shirt- pant- nighty- sari blouse-Salwar- kameez.

UNIT 3: Preparation of Fabric for cutting and Sewing terminology: Duration: 6 Periods(L:3.6-T:2.4)

Definition of grain - selvedge- on grain- off grain- off rain print- with the grain- importance of grain in fabric cutting and garment construction- preparation of fabric for cutting- checking each end of fabric and straightening it- methods of straightening fabric ends- checking and straightening the fabric grain- methods of straightening fabric grain- stretching method- steam press method- immersion method- shrinking fabrics- cotton - linen- wool- steam pressing-rolling fabric in a dampened sheet- sewing terminology- allowance- clip- crease-drape- ease-ease allowance- edge stitch- extension- facing- insertion- inset-lap-marking- notch- pucker- ravel-rip-seam allowance- - seam line-silhouette- slash- tack-Yardage taper- trim - - mitre.- boning- braid- crease- design allowance-drape- notions- pin fit- pinking-pivot- reinforce- tension. marking with accuracy- tracing wheel and dress makers tracing paper- tailors tacks- tailors chalk or marking pencil- thread tracing

UNIT4: Basic Stitches and Seams

Duration: 12 Periods (L:7.2-T:4.8)

Temporary stitches- even basting- uneven basting- diagonal basting- slip basting- permanent stitches- running stitch- slip stitching- hemming- back stitch- run and back stitch or combination stitch- overcasting- overhanding- whipping- hems- purpose of hem- - preparing the hem- types of hems- stitched and turned hem- seam binding hem finish- catch stitched hem-narrow machine stitched hem- rolled or whipped hem- shell edged hem- hem for circular and flared skirt- method 1 and 2- seams and seam finishes -stay stitching- directional stitching- constructing a seam - joining seam lines- stitching- reinforcing a corner seam - trimming- grading- notching-

pressing- Definition of seam- choice of seam- SEMS- PLAIN- Welt seam- flat felled seam- slot seam-lapped seam- strap seam- top stitched seam- single top stitching-double top stitching- hemmed flat felled seam-French seam- Mantua makers seam- piped seam-seam finishes- pinked finish- edge stitched finish- double stitch finish- overcast finish- herringbone finished seam- bound seam edge finish.

UNIT 5: Fullness and Closures

Duration: 14 Periods (L:8.4-T:5.6)

darts- types- principles of basting and stitching darts- tucks- fabric calculation- methods of making tucks- pin tucks- piped tucks or cored tucks-shell or scalloped tucks- cross tucking- group tucking with scalloped effect- pleats- fabric calculation - types- knife pleats- box pleats- inverted pleats- kick pleats- fan pleats- cartridge pleats- pinch pleats- flares- godets-- gathers and shirrs- gathering by hand- gathering by machine- gathering using elastic-shirring or gauging- shirring or gathering with cord piping-frills- or ruffles- double ruffle- circular ruffle- flounces- buttons - button holes- position of buttonholes and buttons- steps in constructing a worked buttonhole- fabric or bound buttonhole-steps in constructing bound buttonhole-button loops- thread loop- fabric loop- corded loops- corded frogs- buttons- materials used in making buttons- marking position of buttons- sewing buttons with holes- sewing shank buttons- link buttons- hooks and eyes- stitching of hooks and eye- eyelets and cords-standards of good placket- continuous bound placket-two piece or bound and faced placket- tailored placket- zipper placket - any two types of making zipper placket

UNIT6: Facings and Apparel Terminology

Duration: 14 Periods (L:8.4-T:5.6)

State the purpose of facing -application- fitted or shaped facings-- facing cut in one with garment piece- neckline and armhole facing cut in one- extended facings- bias facings- cutting and joining bias strips-applying binding- single binding- double binding or French binding- machine applied binding-facing slashed v neck line- decorative facings--Apparel Terminology- Caftan- Apron-Bib-Bloomer dress- Pull over-Tunic blouse-Wrap blouse-Body suit-Cape-Casual wear-Bolero-Blazer-Cuff- Band cuff-Culotte dress-Flapper dress-Jumper-Kimono dress--Pedal pushers-Stole-Bubble skirt- Tunic- Sundress- Draped skirt- PoloFshirt-Jumper- bolero- formal shirt

RECOMMENDED BOOKS

1. Mary Mathews -- Practical Clothing Construction, Part-I& II, Madras.
2. Constance Talbot -- The Complete Book of Sewing, London Museum Press Ltd.
3. Collins -- Encyclopedia of Dress Making, Golden Hands.
4. A.C. & E.M Barrowman -- Step by Step Sewing, VolI&II,MacMillan Company, London.
5. Frances Blondin W M H --The New Encyclopedia of Modern Sewing, Wise & Co., New York.
6. Alison Beazley, Terry Bond -- Computer Aided Pattern Design and Product Development, Black Well Publishing.
7. Readers Digest –Complete Guide to Sewing
8. Dictionary of Fashion – Charlotte Mankey, Calasibitta ,Fairchild, New York
9. Clothing Construction – Evelyn A Mansfield, Houghton Mifflin Company, Boston

Specific Learning Outcomes:

1. TOOLS AND EQUIPMENT

- 1.1 Describe the tools & equipment used in garment making.
- 1.2 Describe the cutting tools used for garment making.
- 1.3 State the uses of scissors and dressmaker's scissors, uses of pinking shears and buttonhole shears.
- 1.4 Describe the embroidery tools used for garment making.
- 1.5 State the uses of embroidery scissors, embroidery frame and needles, uses of needle threader and threads, the uses of thimble and stiletto, the uses of bodkin
- 1.6 Explain the measuring tools used for garment making
- 1.7 State the uses of measuring tape and meter scale, uses of L-Scale and small ruler, Uses of French curves,
- 1.8 Explain the marking tools used for garment making.
- 1.9 State the uses of uses of pencils, carbon paper, tracing wheel and tailor chalk in pattern making and garment construction.

- 1.10 Explain the general tools used for garment making
- 1.11 Explain the uses of pins, pin cushions, seam ripper, and sewing thread, cutting table, mirror, dress form
- 1.12 Describe the pressing tools used for garment making
- 1.13 Explain the uses of iron box, iron boards, sleeve board and press cloth.

- 1.14 Explain domestic model sewing machines
- 1.15 Explain straight stitch and zigzag sewing machines
- 1.16 Explain semi-automatic sewing machines
- 1.17 Explain automatic and super automatic sewing machines
- 1.18 Explain industrial model sewing machines
- 1.19 Explain the features and working of industrial model (heavy duty) single needle lock stitch sewing machine.

2. Anthropometric Measurements

- 2.1 Explain the precautions to be taken while recording body measurements
- 2.2 Define anthropometry and basic land marks.
- 2.3 Classify the measurements needed for upper and lower torso
- 2.4 Explain the procedure of measuring the basic measurements of dress form.
- 2.5 Explain the procedure of measuring the basic measurements of human body.
- 2.6 Explain the computerised body measuring systems.

3. Preparation of Fabric for Cutting and Sewing Terminology

- 3.1 List the steps involved in preparation of fabric for cutting.
- 3.2 Explain the steps involved in preparation of fabric for cutting.
- 3.3 List and explain the methods of straightening fabric ends
- 3.4 List and explain the methods used for straightening fabric grain
- 3.5 Explain the three methods used for straightening fabric grain
- 3.6 Explain shrinking and pressing of fabric.
- 3.7 Define sewing terms.

4. Basic Stitches and Seams

- 4.1 Explain the temporary stitches used in garment making with diagrams
- 4.2 Explain the permanent stitches used in garment construction - running stitch, back stitch, over casting, combination stitch and over handing, overcasting.
- 4.3 Name different hems used in garment making.
- 4.4 Define 'hem'
- 4.5 State the purpose of hem
- 4.6 Explain the various factors for choosing the width of hem
- 4.7 Explain the procedures for making different types of hem – stitched & turned hem, seam binding hem finish, catch stitched hem, narrow machine stitched hem, rolled or whipped hem, shell edged hem,
- 4.8 Define seam and List the uses of different seams
- 4.9 State the factors for selection of seams on a garment.
- 4.10 Explain the process of making plain seam and top stitched seam – single top & double top stitching, lapped seam, welt seam, flat fell seam, slot seam, French seam and Mantua maker's seam
- 4.11 Explain the working of Piped seam
- 4.12 State the purpose of Seam Finishes.
- 4.13 Explain the process of making Pinked finish, Double stitch finish and Edge stitched finish with figures
- 4.14 Sketch and explain the working of different seam finishes - Bound seam edge finish, Herring bone finished seam and overcast finish

5. Fullness and Closures

- 5.1 State the reasons for introducing fullness in garments
- 5.2 List the different ways of introducing fullness
- 5.3 List different types of darts
- 5.4 Explain the making of various types of darts with figures
- 5.5 Name different types of tucks
- 5.6 Explain the various methods of making tucks pin tucks, piped or corded tucks, shell or scalloped tucks, cross tucks, group tucks with scalloped effect -
- 5.7 Name different types of pleats
- 5.8 Explain different types of pleats with figures-knife pleats, box pleats, inverted pleats, kick pleats, fan pleats, cartridge pleats, pinch pleats
- 5.9 List the different ways of gathering or shirring
- 5.10 Explain the different ways of gathering with figures-Gathers: gathering by hand, gathering by machine, gathers made by using elastic, shirring or gauging, gathering with cord piping
- 5.11 Explain different types of frills or ruffles with sketches
- 5.12 Explain the use of flares and godets in garments
- 5.13 Define placket
- 5.14 State the placement of plackets in garments
- 5.15 List the uses of plackets in garments
- 5.16 Explain the standards of a good placket
- 5.17 List the different types of plackets
- 5.18 Explain the construction of a continuous bound placket with illustrations
- 5.19 Explain the construction of a tailored placket with illustrations
- 5.20 Explain the construction of a zipper placket with illustrations (centered application and exposed application)
- 5.21 Explain the construction of bound placket
- 5.22 Name the different types of fasteners
- 5.23 List the uses of button holes
- 5.24 Explain the placement of button holes and their lengths
- 5.25 List the types of button holes
- 5.26 Explain the steps in construction of worked buttonhole with illustrations

- 5.27 Explain the steps in construction of fabric (or bound) buttonhole with illustrations
- 5.28 List the different types of button loops
- 5.29 Describe the construction of various button loops with figures
- 5.30 List the factors which govern the selection of buttons
- 5.31 List the types of buttons. State the material used for construction of buttons
- 5.32 Explain the marking of position for buttons and sewing buttons with holes and shank buttons
- 5.33 State the use of link buttons
- 5.34 Explain the working of other types of fasteners -snap or eyelets and cord with neat sketches
- 5.35 Explain the working of hooks and eyes with neat sketches.

6. Facings and Apparel Terminology

- 6.1 State the Apparel terminology.
- 6.2 Name and Draw the apparel.
- 6.3 Explain the application of single bias binding.
- 6.4 Explain the application of double bias binding.
- 6.5 State the purpose of facing
- 6.6 Describe application of fitted or shaped facing.
- 6.7 Describe the application of facing cut in one with garment piece
- 6.8 Describe neckline and armhole facing cut in one
- 6.9 Explain extended facing and bias facings
- 6.10 Explain facing slashed v neck line.
- 6.11 Explain decorative facings.
- 6.12 Explain the following Apparel Terminology- caftan- apron-bib-bloomer dress- pull over-tunic blouse-wrap blouse-body suit-cape-casual wear-bolero-blazer-cuff- band cuff-culotte dress-flapper dress-jumper-kimono dress--pedal pushers-stole-bubble skirt.

Internal Evaluation

Test	Units	Marks	Pattern
Mid Sem 1	1 and 2	20	Part A 5 Short answer questions Part B 2 Essay questions out of 3 Questions PartC 2 Essay Questions out of 3 questions
Mid Sem 2	3 and 4	20	Part A 5 Short answer questions Part B 2 Essay questions out of 3 Questions Part C 2 Essay questions out of 3 questions
Slip Test 1	1 and 2	5	2 Essay Questions out of 3 Questions
Slip Test 2	3 and 4	5	2 Essay Questions out of 3 Questions
Assignment	1	5	Different group assignments of Higher order Questions that develop problem solving skills and critical thinking should be given
Seminars	1	5	
	Total	60	

Suggested Student Activities

1. Industrial Visit to see the machines in working condition and working procedures.
2. Technical Quiz
3. Group discussion

4. Student visits Library to refer the National and International Journals
5. Students visit the Library to read articles in newspapers, domestic magazines.
6. Student inspects the available equipment in the Lab to identify the parts
7. Surprise test

Suggested E-Learning references

1. www.nptel.as.in
2. www.textilelearner.blogspot.com
3. <https://en.wikipedia.org>
4. www.fibre2fashion.com
5. <http://www.onlinetextileacademy.com>
6. <https://www.slideshare.net>
7. <https://textilechapter.blogspot.com>
8. <https://www.onlinetextileacademy.com>
9. <https://www.youtube.com/watch?v=S4lhDwFxdtk>
10. <https://www.youtube.com/watch?v=EdJSUd71CdI>
11. <https://www.youtube.com/watch?v=U68FvwHaOoE>
12. <https://www.youtube.com/watch?v=EZfb6Rpq3yc>
13. <https://www.youtube.com/watch?v=LRPne5Qa04g>
14. <https://www.youtube.com/watch?v=Oc3jOfpgvOU>

CO-PO Mapping Matrix

Course Outcome		CL	Linked PO	Teaching Hours
CO1	Explain the use of tools and equipment for sewing work.	R/U/A	1,2, 3, 4, 10	8
CO2	Explain the process of taking and recording body measurements manually and by computerized method for different garments	R/U/A	1, 2,3,4,7,8	6
CO3	Adapt the fabric preparation process based on fabric type and ascertain the appropriate sewing terms to use.	/R/U/A	1,2,3,4,	7
CO4	Explain the process of making stitches and seams Manually/with machine and their right choice based on fabric garment and trend.	U/A	2,3,4,10	12
CO5	Explain the process of making fullness, closures and predict the appropriate closures to use.	U/A	2, 3,4,	13

CO6	Evaluate the facings used in different garments for finishing raw edges	U/A	2, 3, 4,10	14
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Semester End Examination marks distribution

	Short answer	Essay	Marks
Part A	10	0	20
Part B	0	4/6	20
Part C		4/6	40
Total	10	8/12	80

Midterm Examination marks distribution

	Short answer	Essay	Marks
Part A	5	0	10
Part B	0	2/3	10
Part C	0	2/3	20
Total	5	4/6	40

Mid Semester Internal Evaluation - 1

Model Paper

Name of the Course : C18- GT I Semester

Code& Name the Subject : C18GT-105F, Basic Sewing Technology

Duration: 90 Min

Max Marks: 40

PART - A

Answer all questions and each question carries 2 marks

5X2= 10

1. List two pressing tools.
2. List two measuring tools.
3. List two parts of domestic sewing machine.
4. State two measurements necessary for stitching sari blouse.
5. State the procedure to take armscye measurement.

PART B

Answer any four questions and each question carries 5 marks

4X5=20

6. Explain the tools necessary for cutting fabric.
7. Explain the functions of any eight parts of sewing machine.
8. Describe the process of taking measurements for stitching frock.

PART C

Answer any Two questions and each question carries 10 Marks

4X10 = 40

9. What tools and equipment do you suggest and use for making a school uniform with synthetic fabric. Justify your answer with reasons.
10. Describe the features of single needle lock stitch machine.
11. Explain the process of taking upper torso measurements to make a fancy dress of your choice.

2ndMid Semester Internal Evaluation - 2

Model Paper

Name of the Course : C18- GT I Semester

Code& Name the Subject : C18GT-105F, Basic Sewing Technology

Duration: 90 Min

Max Marks: 40

PART - A

Answer all questions and each question carries 2 marks

5X2= 10

1. Define yardage
2. Define boning.
3. Define the term rip.
4. Define hem.
5. State two advantages of using temporary stitches.

PART B

Answer any four questions and each question carries 5 marks

4X5=20

6. Explain the shrinking process for cotton fabric.
7. Explain the process of making plain seam.
8. Describe the process of making any two permanent stitches.

PART C

Answer any Two questions and each question carries 10 Marks

4X10 = 40

9. What is the preparation necessary to straighten the ends of a thin and thick fabric.
10. Describe the process of making french seam and suggest the areas on a garment where it can be used.
11. Explain the factors to consider when selecting seams

Semester End Examination Model Question paper

Name of the Course : C18- GT I Semester

Code& Name the Subject : C18GT-105F, Basic Sewing Technology

Duration: 180 Min

Max Marks: 80

PART - A 10X2= 20 Marks

Answer all questions and each question carry 2 marks

1. List two pressing tools.
2. List two length measurements of human body necessary for sewing upper garment.
3. Define ease allowance.
4. Define the term rip.
5. List two temporary stitches.
6. Define dart.
7. Define shirring
8. List two types of buttons.
9. Define bib.
10. Define caftan.

PART B

GROUP-1 ANSWER ANY TWO QUESTIONS 2x5=10

11. How do you take round neck measurement and round bust measurement?
12. Explain the process making the fabric grain perfect by immersion method.
13. Explain the process of making plain seam.

GROUP-2 ANSWER ANY TWO QUESTIONS 2x5=10

14. Describe the process of making gathers using elastic.
15. Explain the process of making top stitched seam for a sari petticoat.
16. What measurements do you take to stitch a upper garment for a person having only one upper limb?

PART C

GROUP-1 ANSWER ANY TWO QUESTIONS 2x10=20

17. What tools and equipment do you suggest and use for making a school uniform with synthetic fabric. Justify your answer with reasons.
18. Explain the process of taking upper torso measurements to make a fancy dress of your choice.
19. Describe the process of making seams and seam finish for cotton frock with lace bodice.

GROUP-2 ANSWER ANY TWO QUESTIONS 2x10=20

20. Describe the process of making the suitable placket for a men's kurta.
21. Explain the preparation of knife pleats and two types of tucks.
22. Explain the application of bias binding.

Department of Technical Education

State Board of Technical Education & Training (TS)

Course Title	Textile Chemistry and Environmental Studies Lab Practice	Course Code	18GT-106P
Semester	I	Course Group	Foundation
Teaching Scheme in Hrs. (L: T: P)	7.5:00:37.5	Credits	1.5
Methodology	Lecture + Practical	Total Contact Hours	45Pds
CIE	60 Marks	SEE	40 Marks

Pre-requisites

This course requires the basic skills of Using tools - required measuring and titrating Glass ware like burette, pipette, Glass rods, Microscope, Cover slip Watch Glass etc. Required for carrying out the practical work.

Course Content and Blue Print of Marks for SEE:

Unit no.	Unit name	hour	Questions for SEE			Marks weightage	Weightage (%)
			Handling	Manipulation	Precision		
1	Preparation of standard solution and estimation of HCL	6	1	2	2	5	12.5
2	Determination of Acidity, Alkalinity and Hardness of Water	9	1	2	2	5	12.5
3	Soap and Detergent	6	1	5	4	10	25

4	Identification of Fibers by Microscopic test and visual inspection Identification of Fibers by burning and solubility test	24	5	10	5	20	50
		45				40	100

NOTE: The above format is a standard one for all courses, however the marks division for SEE question will depend on the combination of question and the parameters like skills and precision to be tested for each experiment in Garment Technology Programme.

Course outcomes

Course Outcome		CL	Linked PO	Teaching Hours
CO1	Identify the significance of Safety Hazards and preventive methods and apply them for safe and efficient Laboratory practice.	R/U/A	1,2,3,4,5,6,7,8	
CO2	Identification of different chemicals, Glassware Microscope and Bunsen/Candles and use them efficiently to carry the experiments.	R/U/A	1,2,3,4	
CO3	Carryout the experiments to prepare solutions assessment of hardness and Acidity and Alkalinity of Water and prepare Soap and Detergent powder	R/U/A	1,2,3	
CO4	Identify textile fibers by means of visual inspection burning test solubility test and microscopic examination	U/A	1,2,3,10	

Course Contents

I. Preparation of solutions

1. Preparation of 0.05M standard sodium carbonate solution.
1. Estimate the HCL present in 250 ml of solution by using standard sodium carbonate solution.
2. Estimation of sodium hydroxide present in 250 ml of solution by using standard HCL solution.
3. Determine the alkalinity of given water sample
4. Determine the alkalinity of given water sample

5. Determination of total hardness of water sample by standard EDTA solution.
6. Prepare Soap by following simple domestic procedure
7. Prepare Detergent Powder using all required ingredients

II. Identification of Fibers by Visual Examination and Microscopic Examination

1. Identification of cotton fibre
2. Identification of wool fibre
3. Identification of viscose rayon
4. Identification of polyester fibre

III. Identification of Textile fibres by burning and solubility test.

1. Identification of cotton fibre
2. Identification of wool fibre
3. Identification of viscose rayon
4. Identification of polyester fibre

SNo.	Name of Experiment	Periods
1	Preparation of standard solution of sodium carbonate.	3
2	Estimation of HCL by using Na_2CO_3 solution	3
3	Determination OF ACIDITY OF WATER SAMPLE	3
4	Determination of alkalinity of water sample.	3
5	Determination of Total hardness of water	3
6	Preparation of detergent powder	3
7	Preparation of soap by cold process	3
8	Longitudinal Microscopic identification of Textile Fibers - cotton, wool, silk, polyester	9
9	Identification of Textile Fibres by burning reaction - cotton, wool, silk polyester.	9
10	Solubility tests for Textile Fibre Identification - cotton, wool, silk Polyester	3
11	Visual inspection of textile Fibres- Cotton, wool, silk polyester	3
TOTAL PERIODS		45

State Board of Technical Education and Training, Telangana

Semester End Examination Model Question paper

DGT I semester practical Examination

Corse Code:18GT-106F

Duration:3 hours

Course Name: Textile Chemistry and Environmental Studies Lab Practice

Max.Marks:40

Instructions to the Candidate:

(i)Answer any One of the following Questions.

(ii)Record the results and write the inference

1. A) Prepare of 0.05M standard Sodium Carbonate Solution and B) identify the given fibre by burning test.
2. A) Preparation of 0.05M standard sodium carbonate solution. B) Carryout the burning test for cotton fibre.
3. A) Determine the hardness of water by EDTA solution. B) Identify the given fibre by visual inspection.
4. A) Identify the given fibre by its microscopic appearance. B) Prepare Detergent powder.
5. Identify the given fibre by its solubility test. Prepare soap by cold process.

Department of Technical Education**State Board of Technical Education & Training (TS)**

Course Title	Basic Sewing Technology Lab Practice	Course Code	18GT-107P
Semester	I	Course Group	Foundation
Teaching Scheme in Hrs(L:T:P)	7.5:00:37.5	Credits	1.5
Methodology	Lecture + Practical	Total Contact Hours	45Pds
CIE	60 Marks	SEE	40 Marks

Pre-requisites

This course requires the basic skills of Handling sewing tools and sewing machine and science knowledge acquired in secondary school education.

Course Content and Blue Print of Marks for SEE:

Unit no.	Unit name	hour	Questions for SEE			Marks weightage	Weightage (%)
			Handling	Manipulation	Precision		
1	Tools and Equipment	5	2	1	1	4	10
2	Anthropometric measurements	2	1		1	2	5
3	Preparation of fabric for cutting	2	1	1	2	4	10
4	Basic stitches	6	1	1	2	4	10
5	Seams and seam finishes	5	2	4	2	8	20
6	Fullness and closures-plackets and fasteners	25	6	6	6	18	45
Total		45				40	100

NOTE: The above format is a standard one for all courses, however the marks division for SEE question will depend on the combination of question and the parameters like skills and precision to be tested for each experiment.

Course outcomes

Course Outcome		CL	Linked PO	Teaching Hours
CO1	Identify and use tools and equipment for different sewing activities.	R/U/A	1,2,3,10	45
CO2	Taking and recording of body measurements	U/A	2,3,7,8,9,10	3
CO3	Fabric preparation for cutting	R/U/A	2, 3,6,7,10	
CO4	Preparation of samples of basic stitches , seams	U/A	2,3,4,10	
CO5	Preparation of fullness and closures- plackets and fasteners	U/A	2,3,4,10	
CO6				

Objectives:

1. TOOLS AND EQUIPMENT:

- 1.1 Identify and use the tools.
- 1.2 Draw different tools.
- 1.3 Know the uses of different tools.
- 1.4 Practice using different tools.
- 1.5 Identify different sewing machines.
- 1.6 Draw the basic sewing machine and label it.
- 1.7 Identify the parts of sewing machine.
- 1.8 Learn to insert needle.
- 1.9 Learn to wind the bobbin.
- 1.10 Learn to stitch on paper and fabric different lines in different directions.
- 1.11 Learn to turn corners.
- 1.12 Learn minor repairs of sewing machine.
- 1.13 Solve problems regarding sewing machine stitching troubles.

2. Anthropometric measurements:

- 2.1 Learn to take manual body measurements.
- 2.2 Learns to take body measurements for different garments.

3. Preparation of fabric for cutting:

- 3.1 Identify any grain defects in fabric.

3.2 Identify cross defects in fabric ends.

3.3 Prepares fabric for stitching.

4. Basic stitches:

4.1 Make samples of basic stitches.

4.2 Learns to use the right basic stitch based on end use and type of fabric and work.

5. seams and seam finishes:

5.1 Make samples of seams and seam finishes.

5.2 Makes samples of seam finishes.

5.3 Identifies different seams.

5.4 Learns to use appropriate seams based on the type of fabric, garment and fashion.

5.5 Learns to use the proper tools and equipment for making seams and seam finishes.

6. Fullness and Closures- Plackets and Fasteners:

6.1 Identifies different fullness samples.

6.2 Make samples of fullness after calculating the material requirement.

6.3 Make samples of plackets and fasteners.

Recommended books

1 Mc Calls Sewing in colour- Paul Hamlyn- London

2 practical clothing construction- part 1 and 2 - Mary Mathews

3 Creative clothing constructions-Allyne Bane-Mcgraw Hill Book Company.

SNo.	Name of Experiment	Periods
1	Tools	2
2	Sewing Equipment	3
3	Taking and recording of body measurements	2
4	Preparation of fabric for cutting	2
5	Basic stitches -temporary stitches- basting - even- uneven- slip basting	3
6	Permanent stitches - running, back stitch, run and back	3
7	Seams	3
8	Seam finishes	2
9	Fullness - darts, tucks , pleats, gathers	3
10	Fasteners - hooks and eyes- press buttons- thread buttonholes - vertical and horizontal	3
11	Bound buttonholes	3
12	Continuous wrap opening placket	3
13	Tailored placket	4
14	Button loops	3
15	Zipper placket	3
TOTAL		45

State Board of Technical Education and Training, Telangana

Semester End Examination Model Question paper

DGT I semester practical Examination

Corse Code:18GT-107F

Duration:3 hours

Course Name: Basic Sewing Technology Lab Practice

Max.Marks:40

Instructions to the Candidate:

(i)Answer any One of the following Questions.

(ii)Write the Drafting and stitching procedure.

6. Prepare two fullness samples – Knife pleats and Plain tucks(Finished fabric dimension 12*14CM)
7. Prepare a zipper placket of your own choice and size.
8. Prepare four temporary stitches samples of size 15*6CM(Length of temporary stitch should be 15CM)
9. Take and record any eight body measurement and prepare a sample with any one permanent stitch.
10. Suggest remedies for needle breaking while sewing on a sewing machine and straighten the grain of the given fabric by immersion method.

Government of Telangana
Department of Technical Education
State Board of Technical Education & Training (TS)

Course Title	Hand Knitted Crafts Lab Practice	Course Code	18GT-108P
Semester	I	Course Group	Core
Teaching Scheme in Hrs(L:T:P)	7.5:00:37.5	Credits	1.5
Methodology	Lecture + Practical	Total Contact Hours	45Pds
CIE	60 Marks	SEE	40 Marks

Course Content and Blue Print of Marks for SEE:

Unit no.	Unit name	hour	Questions to be set SEE			Marks weightage	Weightage (%)
			Handling	Manipulation	Precision		
1	Tools and knitting terminology	2	1	1		2	5
2	Knitted samples	6	2	2	2	6	15
3	Baby booties	6	2	2	2	6	15
4	Baby cap	9	2	2	2	6	15
5	Knitted toys	10	2	2	6	8	20
6	Baby sweater	12	2	2	8	12	30
Total		45				40	100

NOTE: The above format is a standard one for all courses, however the marks division for SEE question will depend on the combination of question and the parameters like skills and precision to be tested for each experiment.

Pre-requisites

This course requires finger dexterity.

Course outcomes

Course Outcome		CL	Linked PO	Teaching Hours
CO1	Identify and use knitting tools and articulate and adapt the knitting terminology.	R/U	1,2,10	
CO2	Acquire the skill of making basic knitting samples	R/U	1,2,5,6,7	
CO3	Prepare baby booties using pleasant colour combination.	R/U/A	1,2,9	
CO4	Analyse the size of cap for different age groups and prepare a good fitting baby cap.	R/U/A	1,2,5,7	
CO5	Make knitted toys with the knowledge of stitches learned	R/U/A	1,2,5	
CO6	Prepare a baby sweater following the procedure.	R/U/A	1,2,3,7	

COURSE CONTENT:

UNIT1Tools and knitting terminology:

Selection of knitting needles and other tools (stitch holder, needle gauge) for hand knitting -. knitting (abbreviations-K –Knit, K1-b- knit one into the back of stitch, K2 tog- knit two stitches together, Kssb- knit slip stitch through the back, Kup1 – pick up and knit the stitch in the row below, K wise- knit wise, LN- left needle, M1,M1-b- make one. pick up loop or running thread below and knit into back of it,m-st- moss stitch, no- number, oz- ounces()- parentheses repeat all the materials between parentheses as many times as indicated, pnso- pass next stitch over,psso-pass slipped stitch,p2sso- pass two slipped stitches over, patt-pattern, P- purl,pl-b- purl into back of stitch, p2tog- purl two stitches together, p-wise- purl wise, rep- repeat, RN- right needle RS- right side, sl- slip stitch, sl1f- slip a stitch onto a cable needle at the front of the work, sl 1b- slip a stitch onto on at back of work, st- stitch, st-st- stocking stitch, tbl- through back of loop, tog-together ,WS-wrong side, Wyib- with yarn in back ,Wyif- with yarn in front, ybk- yarn back ,yfwd- yarn forward, yrn- yarn around needle, y2rn- yarn twice around needle ,yo- yarn over,yo2- a double yarn over, yon- yarn on needle,Inc1- increase one stitch by knitting into the front then back of a stitch, inc- increase ,dpn- double pointed needle, dec- decrease, cn- cable needle, cont- continue, beg- beginning, BC- back cross.)

UNIT 2

Knitted samples:

Samples- Garter stitch, stocking stitch, cartridge stitch, loop pattern seed stitch, double seed stitch, knit 1 purl 1 rib stitch, knit 2 purl 2 ribbing -selvedge – single garter edge

UNIT 3

BABY BOOTIES

Make baby booties for six months baby.

UNIT 4

BABY CAP

Make baby cap for six months baby.

UNIT 5

KNITTED TOYS

Make any two small knitted toys.

UNIT 6

Make a baby sweater for two-year kid

Recommended books

1. Good Housekeeping – knitting and Crochet- Ebury press-London
2. Eleanor Van Zandt- The Complete Step by Step Knitting Book- colour Library books-Hong Kong.
- 3 Mildred Graves Ryan – The Complete Encyclopedia of Stitchery- Doubleday & Company, - New York.

Note: Record should be maintained

State Board of Technical Education and Training, Telangana

Semester End Examination Model Question paper

DGT I semester practical Examination

Corse Code:18GT-108F

Duration:3 hours

Course Name: Hand Knitted Crafts Lab Practice

Max.Marks:40

Instructions to the Candidate:

(i)Answer any One of the following Questions.

(ii)Write the process of making knitted samples

1. Prepare four knitted samples of size 5*8CM
2. Prepare small baby booties to fit the given doll.
3. Prepare baby cap with suitable colour scheme suitable for use for a four months baby
4. Prepare a sample sweater to fit three months baby.

Department of Technical Education

State Board of Technical Education & Training (TS)

Course Title	Basic Drawing and Painting Lab Practice	Course Code	18GT-109P
Semester	I	Course Group	Foundation
Teaching Scheme in Hrs.(L: T:P)	7.5:00:37.5	Credits	1.5
Methodology	Lecture + Practical	Total Contact Hours	45Pds
CIE	60 Marks	SEE	40 Marks

Pre-requisites

Knowledge of science and Math's gained in school education

Course Content and Blue Print of Marks for SEE:

Unit no.	Unit name	hour	Questions for SEE			Marks weightage	Weightage (%)
			Handling	Manipulation	Precision		
1	Free Hand Drawing	9	2	2	4	8	20
2	Memory drawing	9	2	2	4	8	20
3	Motif and Nature Drawing	9	2	2	4	8	20
4	Still Life Drawing	9	2	2	4	8	20
5	Calligraphy	9	2	2	4	8	20
TOTAL		45				40	100

NOTE: The above format is a standard one for all courses, however the marks division for SEE question will depend on the combination of question and the parameters like skills and precision to be tested for each experiment.

Course outcomes

Course Outcome		CL	Linked PO	Teaching Hours
CO1	Skill of finger dexterity, creative skills improvement.	U/A	1,2,3,9,10	45
CO2	Synchronize all the objects dimensions and scenes accurately.	U/A	1,2,3,9,10	9
CO3	Recollect and redesign motifs for different applications.	U/A	1,2,3,9,10	9
CO4	Acquire the art of drawing proportionate 2D objects with shading.	U/A	1,2,3,9,10	9
CO5	Acquire the artistic skill of writing	U/A	1,2,3,9,10	9

COURSE CONTENT:

UNIT 1:

Free Hand Drawing:

Pencil shading-hatching- cross hatching- varying the grade of the pencil- varying pressure on the pencil- very light tone-light tone-middle tone- dark tone-very dark tone. Grade of the pencil- 2H, HB,2B4B,6B. Symmetrical free hand drawing-asymmetrical free drawing – enlarging and reducing drawing

UNIT 2:

Memory Drawing

Draw any object and scene from memory

UNIT 3:

Motif and Nature Drawing

Motif and Nature Drawing: basic lines and line forms like triangle, square, circle ellipse etc., fundamental shapes - cube, cylinder sphere etc. learn to observe nature in its harmonious relationships- colour and shade- light and darkness- proportion and scale symmetry Draw different motifs – traditional, abstract, geometric animals, birds, floral designs.

UNIT 4:

Still Life Drawing

Drawing of symmetrical object on the basis of only vertical central line- drawing of symmetrical objects by drawing construction lines- coloring the complete still life with poster colours.

UNIT 5: Calligraphy

Write capital letters and small letters.

Recommended books:

1. Complete guide to drawing and painting – Readers Digest.
2. Vikas pencil shading – Navneet Publications.

State Board of Technical Education and Training, Telangana

Semester End Examination Model Question paper

DGT I semester practical Examination

Corse Code:18GT-109F

Duration:3 hours

Course Name: Basic Drawing and Painting Lab Practice

Max.Marks:40

Instructions to the Candidate:

(i)Answer any One of the following Questions.

1. Draw a Scene which you visualized before coming to the examination hall (to fit into A4 size paper)
2. Draw the given pot design with shading.
3. Write the given 10 captions using calligraphy script.
4. Draw four unique geometric designs and colour them using poster colours.

COMPUTER FUNDAMENTALS LAB PRACTICE

Course Title : COMPUTER FUNDAMENTALS LAB PRACTICE	Course Code : 18GT-110P
Semester : I	Course Group : Core
Teaching Scheme in Hrs (L:T:P) : 7.5:0:37.5	Credits : 3
Type of course : Tutorial + Practicals	Total Contact Hours : 45 Pds
CIE : 60 Marks	SEE : 40 Marks

Prerequisites

Knowledge of English comprehension , Basic Computer operation and IO devices.

Course Outcome

On successful completion of the course, the students will be able to attain below Course Outcome (CO):

Course Outcome		CL	Linked PO	Teaching Hours
CO1	Identify hardware and software components and work with DOS OS	R,U, A	1,2,3,4,8,9,10	5
CO2	Operate the computer system with Windows OS	R,U, A	1,2,3,4,8,9,10	15
CO3	Access the internet	R,U, A	1,2,3,4,8,9,10	5
CO4	Draft the documents using word processing software	R,U, A	1,2,3,4,8,9,10	20
		Total Sessions		45

Legends: R = Remember U= Understand; A= Apply and above levels (Bloom's revised taxonomy)

Course Contents

COMPUTER BASICS

1. Identify the various components of a Computer system
2. Differentiate between hardware and software
3. State the configuration of a computer system
4. Practice on DOS Internal and External commands.
5. Create and use Batch Files.
6. Know the usage of Editors.

WINDOWS Operating System

7. Exercise on creation of text Files using Notepad, WordPad
8. Exercise on creation of .jpeg, .bmp files using MS Paint
9. Exercise how to use calculator
10. Exercise on creation of folders and organizing files in different folders
11. Exercise on use of Recycle Bin, My Computer and My Documents
12. Exercise on creation of shortcut to files and folders (in other folders) on Desktop
13. Exercise on arranging of icons – name wise, size, type, Modified
14. Exercise on searching, accessing and organizing files / folders
15. Change resolution, colour, appearance, screen server options of Display, date and time

INTERNET

16. Importance of web browser software
17. Structure of URL
18. Create an E-mail account
19. Send & Receive an E-mail
20. Browse the Internet using various search engines

WORD Processing Software

21. Open MS-word and Identify the components on the screen
22. Create a document using MS-word and save it.
23. Create a table using MS-Word and save it.
24. Apply formulas in table & sort the table
25. Convert text into table & table into text.
26. Insertion of new rows and columns in the existing table and changing background colour in Table
27. Merge and split cells in a Table
28. Change the font of a text
29. Exercise with Headers and Footers, paragraph tool bar
30. Insert objects into the document like pictures, shapes, charts, and word-art.
31. Printing a document , page setting, different views of a document
32. Import & export files to & from Word.
33. Create a letter and send to multiple users using mail merge tool of MS-word
34. Create a Simple Newsletter with minimum three columns. Insert a Clip Art in the Newsletter.
35. Create a Resume for a Job Application.
36. Create the Cover Page of a Project Report (use Word Art, insert Picture Image).
37. Prepare the class time table of your class.

Resources:

1. Computer Fundamentals Concepts, Systems, Application, D.P.Nagapal, S.Chand Publication, RP-2014, ISBN: 81-219-2388-3
2. <http://www.tutorialsforopenoffice.org/>

3. <http://www.libreoffice.org/get-help/documentation/>

Software Tool

Any open source tool or equivalent proprietary tools

Composition of Educational Components:

Questions for CIE and SEE will be designed to evaluate the various educational components (Bloom's taxonomy) such as:

Sl. No.	Bloom's Category	%
1	Remembrance	20
2	Understanding	20
3	Application	60

Mapping Course Outcomes with Program Outcomes: (Course Outcome linkage to Cognitive Level)

Course Outcome		Experiment Linked	Linked PO	CL	Lab Sessions
CO1	Identify hardware and software components and work with DOS OS	1,2,3,4,5,6	1,2,3,4,8,9,10	R, U, A	5
CO2	Operate the computer system with Windows OS	7,8,9,10,11,12,13, 14,15	1,2,3,4,8,9,10	R, U, A	15
CO3	Access the internet	16,17,18,19,20	1,2,3,4,8,9,10	R,U, A	5
CO4	Draft the documents using word processing software	21,22,23,24,25,26, 27,28,29,30,31,32, 33,34,35,36,37	1,2,3,4,8,9,10	U, A	20

U-Understanding; A-application/ Analysis; App-Application

Student Activity

1. Observe newspaper pattern of printing.
2. Submit a report of one page

3. Collection of data

Internal Assessment

Activity	Marks
Writing the experiment, record evaluation	30
Execution of the given experiment	20
Viva-voce	10
Total	60

Model Question Bank

1. Identify Physical components of a Computer System.
2. Demonstrate Internal and External DOS Commands and differentiate between them.
3. Create and Rename the file using DOS Commands.
4. Create a directory and copy a file inside the directory using DOS Commands.
5. Demonstrate the basic formatting features in Text Editors.
6. Create two file in a folder and place the shortcut of these files on the desktop.
7. Demonstrate how search engine may be used in browsing Internet.
8. Create an E-mail account
9. Create and Send an E-mail with a picture attachment.
10. Demonstrate how documents can be downloaded using Internet.
11. Using Word Processor Application create a Simple Newsletter with minimum of three columns. Insert a Clip art in the newsletter.
12. Using Word Processor Application create a Resume for a Job application.
13. Using Word Processor Application create the cover page of a Project Report (use Word Art, insert Picture Image).
14. Prepare the class time table for your class using Word Processor Application.