

THIAGARAJAR POLYTECHNIC COLLEGE, SALEM

(Autonomous)

Reg. No. 

April 2019 Examinations

DIPLOMA IN TEXTILE TECHNOLOGY

Textile Wet Processing-I

Year/Sem: II / IV (EVEN-II)

Max. Marks : 75

Time : 3 hr.

**PART-A****(5 x 2 = 10 Marks)****Note: (i) Answer any FIVE questions out of which question No.8 is compulsory.****(ii) All questions carry equal marks.**

- 1 State the object of singeing.
- 2 What are the importance of scouring?
- 3 What are the objects of mercerization?
- 4 Define the term affinity, exhaustion.
- 5 State four properties of reactive dyes.
- 6 Why is disperse dye preferred for dyeing of polyester.
- 7 Write any two defects in garment dyeing process.
- 8 State the limitation of computer colour matching.

**PART-B****(5 x 3 = 15 Marks)****Note: (i) Answer any FIVE questions out of which question No. 16 is compulsory.****(ii) All questions carry equal marks.**

- 9 What are the precaution to be taken for gas singeing process.
- 10 Distinguish between organic and chemical processing.
- 11 What are the purpose of hydro extractor.
- 12 Write the classification of dyes.
- 13 What is the use of sodium carbonate in reactive dyeing?
- 14 Mention the dyeing recipe for cationic dyes with acrylic.
- 15 Write the causes and remedies for garment dyeing defects.
- 16 Give the short notes on absorbency test by drop test method.

**PART-C****(5 x 10 = 50 Marks)****Note: (i) Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.****(ii) All divisions carry equal marks.**

- 17 A With a neat sketch, explain the procedure for scouring of cotton using kier. 10  
(OR)  
B With a neat sketch, explain the continuous bleaching of cotton goods with suitable machine. 10
- 18 A Explain with a neat sketch the chainless mercerizing machine. 10  
(OR)  
B Explain in detail the working of RF dryer and balloon padding. 10
- 19 A How will apply the HE dyes on cotton with detail. 10  
(OR)  
B Explain in detail about the application procedure for Leuco VAT dye on cotton. 10
- 20 A Explain in detail about the application of acid dyes on silk material. 10  
(OR)  
B With a neat sketch explain the dyeing of PET by HTHP Beam dyeing machine. 10
- 21 A Explain in detail about the estimation of barium activity number of mercerized cotton goods. 10  
(OR)  
B Explain in detail about the determination of washing fastness of dyed material. 10

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Basic Engineering

Year/Sem: II / IV (EVEN-II)

Max. Marks : 75

Time : 3 hr.

**PART-A****(5 x 2 = 10 Marks)****Note: (i) Answer any FIVE questions out of which question No.8 is compulsory.****(ii) All questions carry equal marks.**

- 1 Explain calorific value of fuel
- 2 Differentiate clutch and brake.
- 3 State Ohm's Law.
- 4 What is earthing?
- 5 What is proximity sensor?
- 6 Mention the types of paints?
- 7 Name some of the roof coverings?
- 8 Name any one type of boiler used in textile industry.

**PART-B****(5 x 3 = 15 Marks)****Note: (i) Answer any FIVE questions out of which question No. 16 is compulsory.****(ii) All questions carry equal marks.**

- 9 List any three applications of steam in textile mill.
- 10 Explain any one type of lubrication system.
- 11 Classify different types of drives.
- 12 State the formula for power and energy.
- 13 What is the necessity of starters?
- 14 Mention the types of false ceiling?
- 15 Mention the Fire fighting equipments.
- 16 What is LDR?

**PART-C****(5 x 10 = 50 Marks)****Note: (i) Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.****(ii) All divisions carry equal marks.**

- 17 A Sketch and explain the construction of Reciprocating pump. 10  
(OR)  
B Sketch and explain the construction of window type air conditioner. 10
- 18 A Sketch and explain the construction of pressure feed lubrication system. 10  
(OR)  
B Draw a neat sketch of hydraulic brake system and explain its working. 10
- 19 A With neat sketch explain 3 $\phi$  induction motor. 10  
(OR)  
B Draw and explain full wave rectifier. 10
- 20 A Explain the principle and working of transformer. 10  
(OR)  
B Explain the block diagram of PLC. 10
- 21 A Explain any two types of spread foundation with sketches? 10  
(OR)  
B Write brief note on points to be considered while fixing AC sheets? 10

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**PART-A****(5 x 2 = 10 Marks)****Note: (i) Answer any FIVE questions out of which question No.8 is compulsory.****(ii) All questions carry equal marks.**

- 1 Give the names of any two comber preparatory machines.
- 2 Mention the RH % maintained in comber preparatory and comber.
- 3 Mention any one function of a spacer and any one function of a nose bar in speed frame.
- 4 Mention any two defects in speed frame roving.
- 5 Mention any two objects of a Ring frame.
- 6 Mention any two types of Rings in a Ring frame.
- 7 What is Twist Multiplier?
- 8 Mention any two types of Reeling.

**PART-B****(5 x 3 = 15 Marks)****Note: (i) Answer any FIVE questions out of which question No. 16 is compulsory.****(ii) All questions carry equal marks.**

- 9 What are the objects of combing?
- 10 Give the flow chart for the process sequences in the combing preparatory Department.
- 11 Explain Bobbin Lead and Flyer Lead.
- 12 Write short notes on Roller setting & its importance in a speed frame.
- 13 Give short notes on Traveller.
- 14 Write short notes on yarn imperfections.
- 15 Write short notes on overhead Travelling Cleaner.
- 16 What are the objects of bundling and baling?

**PART-C****(5 x 10 = 50 Marks)****Note: (i) Answer all the questions choosing either sub-division (A) or sub-division (B) of each question.****(ii) All divisions carry equal marks.**

- 17 A With a neat sketch, explain the working of a Ribbon Lap machine. 10  
(OR)  
B Discuss in detail about the salient features of a comber. 10
- 18 A With a neat sketch, explain the passage of material and the function of their parts in a speed frame. 10  
(OR)  
B Explain in detail about the salient features of a modern speed frame. 10
- 19 A Discuss in detail about the cop building mechanism in a Ring frame. 10  
(OR)  
B Discuss about the passage of material and the functions of their parts in a Ring frame. 10
- 20 A A Ring frame has the following Parameters. 10  
Spindle speed : 19500  
Count : 30s  
TM : 4.75  
Efficiency : 94  
No. of spindles : 432  
Calculate the production in Kg per frame per shift of 8 hours.  
(OR)  
B Discuss detail about the common defects in ring spun yarns, their causes and remedies. 10
- 21 A Discuss in details about the passage of materials through a Dry doubling machines. Explain its working also. 10  
(OR)  
B Discuss in detail about the working and the passage of material through the Reeling machine. 10

- 18 A Draw the design, draft and peg plan for the following weaves. 10  
 a) Regular warp Rib b) Irregular Weft Rib c) Irregular Matt weave.  
 (OR)
- B Mark the design, draft and peg plan for the following weaves. 10  
 a) Pointed 3/3 twill b) Combined twill 2/2, 3/1 c) Transposed twill 12 X 12
- 19 A Mark the design, draft and peg plan for the following weaves. 10  
 a) 10 ends regular satin and sateen b) Any two methods of crepe weave  
 (OR)
- B Draw the design, draft and peg plan for the following weaves. 10  
 a) 8 ends Irregular satin and sateen b) Brighton Honey comb
- 20 A Draw the design, draft and peg plan for the following weaves. 10  
 a) Huck - a - back weave b) Mock - leno weave c) Plain faced bed ford cord  
 (OR)
- B Mark the design, draft and peg plan for the following weaves. 10  
 a) Modified Huck - a - back weave b) Twill faced bed ford cord
- 21 A Construct an extra warp design and extra weft design in the ratio of 1:1 and 2:2 10  
 by using a small motif.  
 (OR)
- B Mark the design, draft and peg plan for 3 picks, 4 picks, 5 picks terry structure and 10  
 draw the cross section of the weave.

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