



M.TECH DEGREE EXAMINATIONS: MAY 2018

(Regulation 2015)

Second Semester

APPAREL TECHNOLOGY

P15ATT201:Technology Of Apparel Finishing

COURSE OUTCOMES

- CO1:** Discuss and describe the advanced printing and garment finishing techniques.
- CO2:** Describe the advanced finishing techniques and unconventional finishing techniques.
- CO3:** Identify advanced finishing techniques for different finishing applications.
- CO4:** Define and identifying the eco parameters for eco-friendly finishing processes and chemicals.
- CO5:** Suggest and adopt ecofriendly measures for dyeing, printing and finishing for sustainable development

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Assertion (A): Salt and alkali free reactive dyeing is possible on cotton fabric. CO1 [K₄]
Reason (R):Pretreatment of cotton and modification of reactive dyes can be done
- a) Both A and R are Individually true and R is the correct explanation of A b) Both A and R are Individually true but R is not the correct explanation of A
- c) A is true but R is false d) A is false but R is true
2. Match the following CO3 [K₃]
- A. THPC – i. Easy care
B. BTCA – ii. UV resistant
C. SPF – iii .Fire retardant
D. PTFE - iv. Water proof
- a) A- ii, B-i, C- iv, D-iii b) A- ii, B-iii, C- iv, D-i
- c) A- iii, B-i, C- ii, D-iv d) A- iii, B-ii, C- iv, D-i
3. Biopolishing is an ecofriendly process because CO2 [K₁]
- a) It uses no water b) It uses stones available in nature
- c) Enzymes are biodegradable d) Enzymes work on lock and key mechanism

4. Match List I with List II

CO1 [K₃]

List I	List II
A. Sublimation	i. Electrostatic discharge
B. Xerographic	ii. Printing design on special paper
C. Digital printing	iii. Flat or rotary screen
D. Screen printing	iv. Printing directly on fabric

- | | A | B | C | D |
|----|-----|----|-----|-----|
| a) | ii | i | iii | iv |
| b) | iii | iv | ii | i |
| c) | ii | i | iv | iii |
| d) | iii | i | ii | Iv |

5. Assertion (A): Ultrasonic waves can be used for increasing the dyeing rate

CO5 [K₄]

Reason (R): The vat and sulphur dyes are insoluble in water

- | | |
|---|---|
| a) Both A and R are Individually true and R is the correct explanation of A | b) Both A and R are Individually true but R is not the correct explanation of A |
| c) A is true but R is false | d) A is false but R is true |

6. Which one cannot be used for application of dyes

CO2 [K₂]

- | | |
|-----------------------------------|---------------|
| a) Super critical Co ₂ | b) Ultrasonic |
| c) Microwaves | d) Plasma |

7. Which of the following statement(s) is/are false ?

CO2 [K₄]

- In microcapsule, core component is released by friction, pressure and change of temperature
 - Plasma is called as fourth state of matter
 - Nano particles can be encapsulated and applied on textiles
 - Plasma uses steam and vacuum for fabric finishing
- | | |
|--------|--------|
| a) 1,3 | b) 1,4 |
| c) 1,2 | d) 2,3 |

8. -----is dry compound coating technique

CO4 [K₂]

- | | |
|-----------------|--------------------|
| a) Knife roller | b) Gravure coating |
| c) calendering | d) Dip coating |

9. Use of ----- is to be avoided in finishing due to health hazards CO5 [K₂]
- a) Formaldehyde b) Softners
- c) Antioxidants d) UV stabilisers
10. Best Sequence for an eco friendly processing is CO4 [K₃]
1. Reuse 2. recycle 3.Reduction of source chemicals 4.Green process
- a) 2-3-4-1 b) 1-3-2-4
- c) 3-4-1-2 d) 4-1-3-2

PART B (10 x 2 = 20 Marks)

11. Mention how do reactive dyeing can be carried out without or low salt. CO1 [K₃]
12. Differentiate between durable press and wrinkle resistant finish. CO2 [K₄]
13. Name the enzymes used for biopolishing and denim washing. How do they work? CO2 [K₃]
14. State the use of PTFE, THPC and Velan PF CO3 [K₃]
15. Differentiate micro capsules and nano particles. CO3 [K₄]
16. How will you get antimicrobial finish using Plasma? CO4 [K₃]
17. What do you mean by foam coating? CO4 [K₂]
18. State the applications of coating of textiles. CO3 [K₃]
19. List out the various pollutants generated in textile wet processing industry. CO5 [K₂]
20. Is there any biodegradable dyes available? Name them. CO4 [K₃]

PART C (10 x 5 = 50 Marks)

21. Reactive dyes are dominant choice of colorants. Update the recent developments made in reactive dyes. CO1 [K₃]
22. Summarize the new developments in dyeing techniques. CO1 [K₄]
23. Explain how normal cotton fabric can be converted into wrinkle resistant fabric CO2 [K₂]
24. How do enzyme based finishing is better than chemical or stone wash? CO2 [K₃]
25. Classify different types of Plasma. CO3 [K₂]
26. Outline different microencapsulation techniques. CO3 [K₃]
27. Highlight on advances in drying and curing techniques. CO4 [K₄]
28. With diagrams, explain fluid coating techniques for textiles. CO4 [K₂]
29. Explain how waterpollution due to textile chemical processing is harmful to environment. CO5 [K₂]
30. List out the names of five restricted chemicals and give alternatives. CO4 [K₂]

Answer any TWO Questions
PART D (2 x 10 = 20 Marks)

- | | |
|---|-----------------------|
| 31. Digital printing technology is revolutionizing the fashion industry and is poised for strong growth in the near future. Explain digital printing technique and compare its advantages with conventional printing methods. | CO1 [K ₄] |
| 32. Compare and contrast Plasma , Nano and microencapsulation finishing methods | CO2 [K ₄] |
| 33. Examine the recent developments in ecofriendly dyeing, printing and finishing. | CO5 [K ₃] |
