



GENERAL INSTRUCTIONS TO THE CANDIDATES

1. Candidates are instructed to answer the questions as per Bloom's Taxonomy knowledge level (K₁ to K₆)
2. Candidates are strictly instructed not to write anything in the question paper other than their roll number.
3. Candidates should search their pockets, desks and benches and handover to the Hall Superintendent/ Invigilator if any paper, book or note which they may find therein as soon as they enter the examination hall.
4. Candidates are not permitted to bring electronic watches with memory, laptop computers, personal systems, walkie-talkie sets, paging devices, mobile phones, cameras, recording systems or any other gadget / device /object that would be of unfair assistance to him / her.
5. Corrective measures as per KCT examination policies will be imposed for malpractice in the hall like copying from any papers, books or notes and attempting to elicit the answer from neighbours.

B.TECH DEGREE EXAMINATIONS: JUNE 2015

(Regulation 2014)

Second Semester

FASHION TECHNOLOGY

U14FTT201:Fibre Science and Yarn Technology

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. The fibre which has the highest initial modulus is [K₂]
 - a) Wool
 - b) Silk
 - c) Rayon
 - d) Cotton
2. Match List I with List II and select the correct answer using code given below the list. [K₁]

8. Assertion (A): Super absorbent fibres are used to produce a wide range of non woven, yarns and tapes. [K₂]

Reason (R): The fibre give rise to exceptionally substantive and even distribution profiles within final fabric construction, excellent retention and low shedding.

- a) A is correct and R is incorrect b) A is correct but R is not the valid reason
c) A is incorrect but R is the valid statement d) A is correct and R is the valid reason

9. Heat setting of synthetic filaments is done to [K₁]

- a) Remove built in stresses b) Increase crystallinity
c) Increase strength d) Reduce extension to break

10. Choose the correct statements from the following: [K₂]

P. Silk is highly sensitive to alkali while wool is not

Q. Plying of single yarn results in reduction in hairiness

R. Maximum reduction in neps takes place at Blowroom

S. Bulging of bunches of yarn at the nose of the cones is a package fault

- a) P,S b) Q,R
c) Q,S d) P,R

PART B (10 x 2 = 20 Marks)

(Answer not more than 40 words)

11. Elucidate the physical and chemical structure of cotton fibre [K₂]
12. Outline the desirable properties of textile fibres [K₃]
13. Sketch the production sequence of elastomeric fibres [K₃]
14. Enumerate the physical and chemical properties of acrylic fibres [K₄]
15. Enlist the objectives and types of ginning systems [K₁]
16. Demonstrate the working principle of DREF spinning systems [K₂]
17. Distinguish between worsted and woollen spinning systems [K₂]
18. Analyse the working principle of compact spinning systems [K₄]
19. List the characteristics and application of ply yarns [K₁]
20. Name few package faults and identify the reason for the same [K₁]

Answer any FIVE Questions:-

PART C (5 x 14 = 70 Marks)

(Answer not more than 300 words)

Q.No. 21 is Compulsory

21. (i) Discuss the cultivation and production of silk and wool fibres (10) [K₂]
(ii) Explain the physical and chemical properties of high wet modulus rayon (4) [K₂]
22. (i) Analyse the significance of spin finishes and texturisation of synthetic fibres (7) [K₄]
(ii) Examine the characteristics of speciality fibres used for medical and hygiene applications (7) [K₄]
23. (i) Discuss the objectives and working principle of air jet spinning system (8) [K₂]
(ii) Analyse the process sequence and objectives of rotor spinning (6) [K₄]
24. (i) Illustrate the working of Siro and Solo spinning (6) [K₃]
(ii) Formulate the principles involved in long staple spinning (8) [K₆]
25. (i) Identify the troubleshooting techniques available to overcome the package faults (7) [K₂]
(ii) Analyse the working principle of Two for One twister with a neat diagram (7) [K₄]
26. (i) Interpret the properties and applications of high temperature and flame retardant fibres (7) [K₃]
(ii) Assess the characteristics and application of sewing threads (7) [K₅]
