Register Number:……..

KUMARAGURU
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B.TECH DEGREE EXAMINATIONS: JUNE 2017

(Regulation 2015)

Second Semester.

FASHION TECHNOLOGY

U15FT*T*201**:** Yarn Technology

COURSE OUTCOMES

CO1: Describe the process flow in short staple spinning and also explain the different techniques in yarn manufacturing

CO2: Outline sequentially the processes involved in spinning long staple worsted yarns, and describe the working of various machines used

CO3: Acquire knowledge on post spinning operations and machine used for the process

CO4: Compare the quality characteristics of different yarns.

CO5: Describe the various post spinning processes for spun yarns

CO6: Acquire knowledge on sewing threads and various speciality yarn manufacturing techniques

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Cone Winding is the process of converting the ring cops into CO3 [K_2]

   a) Cones b) Hanks

   c) Cheese d) bobbin

2. Select the wrong statement(s). CO1 [K_3]

   i)Rotor spinning is an open end spinning
   ii)Bigger size packages are formed in rotor spinning than Ring spinning
   iii)Rotor speed is higher than Ring spinning spindle speed
   iv)Rotor spinning is suitable for all kinds of fibres and all all counts of yarn

   a) i.ii b) iv

   c) iii.iv d) ii

3. Select the correct sequence involved in manufacturing of worsted yarn CO2 [K_2]

   1.Carding 2.Combing 3.Blow room 4.Simplex 5.Drawing

   a) 1,2,3,4,5 b) 3,1,5,2,4

   c) 3,1,2,5,4 d) 3.2.1.5.4

4. **Assertion (A):** Polyester sewing thread is increasingly used than cotton sewing thread CO6 [K_2]

Reason (R): Polyester has higher strength and elongation than cotton sewing thread

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

5. Match the following CO1 [K_2]

List I(spinning system)	List II(yarn speed)
A.Ring spinning	(i) 100mpm
(B) Rotor spinning	(ii) 200mpm
(C)DREF spinning	(iii) 300mpm
(D) Airjet spinning	(iv) 30mpm

a) ii,iii,iv,i

b) i,ii,iii,iv

c) ii,i,iii,iv

d) iv,i,ii,iii

6. Select the correct Sequence involved in the manufacture of ring double yarn CO3 [K_3]

1.Spinning 2.conewinding 3.Assembly winding 4.Ring doubling

a) 1,2,3,4

b) 1,3,4,2

c) 1,3,2,4

d) 2,1,3,4

7. Conventional cone winders removes which fault(s) CO4 [K_2]

a) Thick faults

b) Neps

c) Thin faults

d) All the above

8. **Assertion (A):** The compact spun yarn has higher strength CO4 [K_3]

Reason (R): The compact spun yarn has lower hairiness and better fibre binding

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

9. Select the correct statement(s). CO5 [K_2]

i) The process which introduces loops and folds is Texturisation

ii) The core spun yarn has fine filament in core and staple fibre in cover

iii) Sewing thread twist direction is Z

iv) Fancy yarn is produced in ring spinning machine

a) i,ii,iii,iv

b) i,ii,iii,

c) i,ii

d) i

10. Match the following CO2 [K_2]

List I(process)	List II(objective)
a) scouring	(i) short fibre removal
(b) Carding	(ii) impurities removal
(c)Combing	(iii) fibre opening
(d) Blowroom	(iv) individualization

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

PART B (10 x 2 = 20 Marks)

(Answer not more than 40 words)

11. Analyze the merits and demerits of combed yarns over carded yarns CO4 [K_2]
12. Compare the merits of compact spun yarn quality over normal ring spun yarn CO4 [K_4]
13. Analyze the merits and demerits of TFO over Ring doubling CO3 [K_4]
14. Analyze the merits and demerits of Autoconer over conventional winder CO3 [K_4]
15. List any four important foreign matters present in raw cotton? CO1 [K_1]
16. Identify the main objectives of carding machine. CO1 [K_1]
17. Give the process flow chart for manufacturing woolen yarn CO2 [K_1]
18. Compare woolen yarns process and quality with worsted yarns CO2 [K_4]
19. Analyze the important merits of polyester/ cotton core spun sewing thread over polyester / cotton blended sewing thread CO6 [K_4]
20. Discuss any four important merits of texturised yarn over regular filament yarn CO5 [K_2]

Answer any FIVE Questions:-

PART C (5 x 14 = 70 Marks)

(Answer not more than 300 words)

Q.No. 21 is Compulsory

21. Compare the properties and applications of yarn produced from different spinning systems. CO4 [K_4]

22.	With a suitable flow chart explain in detail the sequence of process involved in the manufacture of worsted yarn.	CO2	[K_1]
23.	Explain the passage of material through two for one twister with neat sketch.	CO3	[K_2]
24.	Discuss the objectives and working principle of saw ginning machine with a neat sketch.	CO1	[K_2]
25.	Discuss in detail the cotton sewing thread manufacturing process.	CO6	[K_1]
26.	Analyze in detail the causes and remedies for any seven important package faults occurring in cone winding machine.	CO5	[K_4]
27.	Discuss the objectives and working principle of carding machine with a neat sketch.	CO1	[K_2]

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