

**B.TECH. DEGREE EXAMINATIONS: APRIL / MAY 2009**

Fourth Semester

**TEXTILE TECHNOLOGY****U07TT403 Knitting Technology****Time: Three Hours****Maximum Marks: 100****Answer ALL the Questions:-****PART A (20 x 1 = 20 Marks)**

1. The first circular knitting machine was invented by-----  
 (a) Decroix in 1789 (b) Q.V. Lamb in 1863  
 (c) Jeacock of Leicester in 1856 (d) Barly in 1850
2. The aggregate of the top arc and of the two sides of the loop  
 (a) Closed loop (b) Needle loop (c) Sinker loop (d) Open loop
3. 6x 3 Rib is called a -----  
 (a) half- cardigan (b) royal rib (c) polka rib (d) derby rib
4. Maximum design width of full jacquard  
 (a) 24 wales (b) 48 wales (c) 60 wales (d) 144 wales
5. The needle selection pattern wheel is positioned to cylinder at -----  
 (a)  $38^{\circ}$  to  $45^{\circ}$  (b)  $60^{\circ}$  to  $65^{\circ}$  (c)  $70^{\circ}$  to  $75^{\circ}$  (d)  $30^{\circ}$  to  $35^{\circ}$
6. How many numbers of needles will be required in a cylinder to produce a fabric of 14 inch wide using  $16^s$  yarn?  
 (a) 784 (b) 764 (c) 744 (d) 734
7. What is the shrinkage ratio? If a 21 inch machine, 180 inch of yarns are required for each course.  
 (a) 3.72 (b) 2.72 (c) 4.72 (d) 1.72
8. Accordion type structure are made by -----  
 (a) Knit, tuck (b) Knit, float (c) Knit (d) knit, tuck and float
9. To blend the cotton they should not differ in micronaire value by more than ----- for Hosiery yarn  
 (a) 2.5 (b) 2.0 (c) 1.5 (d) 1.2
10. A 2040 needle machine is knitting  $25^s$  cotton count yarn. What will be the theoretical width of the fabric?  
 (a) 58.1" (b) 40" (c) 38" (d) 36"

11. What types of needle is used in Milanese machine?  
 (a) Spring beard needles (b) Two spring beard needles  
 (c) Latch needle (d) Compound needle
12. ----- are relief structures in rib where successive tuck stitches on all the needles of a certain needle of one bed produced a three dimensional effects.  
 (a) Racked fabric (b) Knob fabric  
 (c) Fleece fabric (d) pique structure
13. Find out the Run-in, if course length 633.4cm and knitting m/c speed 35 Rpm  
 (a) 221.7 m/min (b) 201.6 m/min (c) 246.1 m/min (d) 231.8
14. The number of guide bars are used in Raschel knitting machine  
 (a) 1 (b) 2 (c) above 6 (d) 3
15. Guide bar shogging at the front of needle is -----  
 (a) Under lap (b) over lap (c) closed lap (d) open
16. Tricot (open) stitch lapping movement of guide bar  
 (a) 1-0 / 1-2 (b) 0-1 / 2-1 (c) 1-0 / 2-1 (d) 0-1 /
17. Relanit technology for -----  
 (a) Reduced pulling force (b) Greater productivity  
 (c) fewer faults (d) Reduced pulling force and fewer deflections
18. The fabric take-down in Tricot knitting machine at -----  
 (a)  $90^{\circ}$  from the knitting zone (b)  $160^{\circ}$  from the knitting zone  
 (c)  $65^{\circ}$  from the knitting zone (d)  $60^{\circ}$  from the knitting zone
19. What type of machine is suitable for producing Gloves?  
 (a) Tricot (b) Raschel (c) simplex (d) 78 bar Raschel
20. How many minimum numbers of colors are required to produce the Blister fabrics?  
 (a) 1 (b) 2 (c) 4 (d) 6

**PART B (5 x 16 = 80 Marks)**

21. a) Compare warp and Weft Knitted fabric  
 (OR)  
 21. b) Compare woven fabric and knitted fabric
22. a) Discuss the characteristics of plain knitted structures

(OR)

22. b) Discuss the characteristics of interlock knitted structure

eedles

23. a) Explain the Knitting Action of a Circular Rib Machine

all the needle

(OR)

23.b) Explain with needle notation sketch of double jersey derivative structure.

d 35 Rpm

24.a) Explain with neat sketch of knitting action of tricot knitting Machine

(d) 231,

(OR)

24.b) Explain the Knitting Action of the Single Needle Bar Raschel knitting machine

(d) 3

25.a) Calculate the production per hour of a two bar machine running at 960rpm at 90% efficiency. The top bar uses a 70 denier runner of 60 inch and the bottom bar a 20 denier runner of 40 inch width, with a number of ends per bar being 4800.

(d) open

(d) 0-1 /

(OR)

25.b) Discuss the various common knitted Fabric defects, causes and remedies

ewer deflectin

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l) 78 bar Rascl

3lister fabrics?

l) 6