KUMARAGURU
college of technology
character is life

Register Number: ……..

B.TECH DEGREE EXAMINATIONS: NOV/DEC 2014

(Regulation 2009)

Fourth Semester

TEXTILE TECHNOLOGY

TTX105: Weaving Technology

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

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. In cross winding, the coils are laid_____to one another.
   a) perpendicular b) parallel
   c) cross d) near parallel
2. In winding, thick places and big knots are removed by _____
   a) tensioners b) knotters
   c) guides d) slub catchers
3. In sizing, ____type of creel occupies less floor space.
   a) vertical b) over under
   c) horizontal d) inclined
4. In a modern beam warping machine, the creel capacity is around_____
   a) 576 b) 300
   c) 200 d) 400
5. A modern pinning machine speed is approximately_____.
   a) 150 droppers/minute b) 100 droppers/minute
   c) 50 droppers/minute d) 250 droppers/minute
6. In a dobby loom, the dobby mechanism can able to control_____ number of heald frames.
   a) 6 b) 10
   c) 24 d) 12

7. In a weaving machine, the timings of different motions in a loom cycle are governed by the position of the _____

a) sley b) crank

c) picking tappet d) starting handle

8. In weaving, the function of _____is to act as checking devices for the incoming shuttle.

a) buffer b) picker

c) check strap d) picker spindle

9. ____types of drop box motion are highly recommended for weft mixing and reduce the possibility of weft bars.

a) 2X1 b) 4X4

c) 2X2 d) 3X3

10. In weaving, ____is used to stop when the shuttle fails to reach the shuttle box during picking.

a) warp protector motion b) take-up motion

c) let-off motion d) stop motion

PART B (10 x 2 = 20 Marks)

11. Define precision winding.
12. How will you decide bunch length?
13. List the primary ingredients of a size paste.
14. What is meant by single end sizing?
15. State the role of temple motion in a loom.
16. Give any two comparisons of dobby shedding and jacquard shedding.
17. State the principle of positive and negative let-off motion in a loom.
18. Define the term sley eccentricity.
19. How many weft colors are possible to use in a 4X1 drop box motion loom?
20. State the term reed count.

PART C (5 x 14 = 70 Marks)

21. a) (i) Compare and contrast mechanical yarn clearers with electronic yarn clearer (6)

(ii) Demonstrate the passage of materials of a spindle less pirn winding machine with a simple sketch. (8)

(OR)

b) (i) The spindle speed of a pirn winder is 7000rpm. If the pirn used has external and internal diameter of 1 inch and 0.39inch respectively, calculate the production/spindle of 40s yarn per shift of 7.5 hours at 80% efficiency. (10)

(ii) How will you solve the effect pattern formation in a cone winding process? (4)

22. a) Explain the construction and working principle of a multi cylinder sizing machine with a neat sketch.

(OR)

b) Discuss in detail about controlling of warp stretch in a sizing process.

23. a) Describe the features of a fully automatic drawing-in and reaching machine with relevant sketches.

(**OR**)

b) Illustrate a double cylinder and double lift jacquard and explain the principle of working.

24. a) Construct a cone under pick motion and describe the functional principle and compare with over pick motion

(OR)

b) How will you achieve fractional cover factor with the use of seven wheel take up motion? Explain in detail with a sketch.

25. a) Explain how you will achieve random multi colour weft insertion with a pick-at will loom with relevant sketch.

(OR)

b) (i) Describe on the selection of heald frames. (6)

(ii) Illustrate and explain the working principle of a side weft fork motion. (8)

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