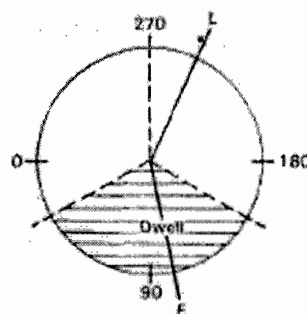


MAJOR TEST

Fabric Manufacture I

Maximum Marks: 45

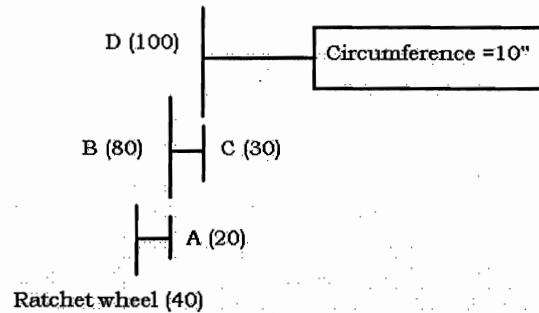
1. Double acting Keighley dobby will nearly produce (1* 5=5)
 - a. Bottom closed shed
 - b. Semi open shed
 - c. Centre closed shed
 - d. Open shed
2. While weaving a cloth, bumping could be avoided by
 - a. Increasing the warp tension
 - b. Decreasing the warp tension
 - c. Increasing the picks per unit length
 - d. Changing the shedding timing
3. Weft feeler motion aids in
 - a. Warp protection
 - b. Warp stop
 - c. Weft stop
 - d. Automatic weft replacement
4. Power cost for picking per unit length of fabric will be proportionate with.
 - a. PPM
 - b. $(PPM)^2$
 - c. $(PPM)^3$
 - d. $(PPM)^4$
5. The shuttle must come to rest in the fast reed loom by around
 - a. 250 degree
 - b. 270 degree
 - c. 300 degree
 - d. 150 degree
6. What are the necessary conditions of take-up motion for the elimination of dangerous periodicities in the fabric? For three up two down twill, show the heald displacement for bottom closed shed and open shed. (2+3)
7. Explain the disadvantage of the loom timing shown below. How the loom timing has to be changed if the loom has to weave delicate filaments? (2 +3)



8. Between the two types of heald shaft motions, i.e. low lift and long dwell and high lift and no dwell, which one do you prefer and why? (1+ 4)
9. a) For the following take up system determine the cause of periodicity in pick spacing if

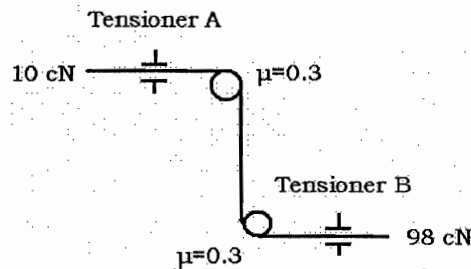
- I. Wavelength is 0.75 inch
- II. Wavelength is 0.0375 inch

- b) If only one tooth of gear A is worn-out then what type of fault will be produced in the fabric



(3+2)

10. Derive the relationship among the strain of warp yarns, height of the shed, length of the shed and shed symmetry parameter. (5)
11. Show the yarn path on a cheese when wind/double traverse is 5. The following tensioning system is being used in a winding system. The input and output tensions are 10 cN and 98 cN respectively. If disc (additive) type tensioners A and B are identical then calculate the weights of the disc to be used in tensioners A and B. (5)



12. A 100 kg cotton warp (with moisture content = 6%) conditioned in standard atmosphere is sized with a paste of 12% concentration. If 8% add on the bone dry weight of the yarn is aimed then what should be the wet pick up? How much water has to be evaporated so as to leave 8% moisture content in the warp and in the size film? (5)
13. A 60 Stockport reed of 1.5 m width is being used on the loom. The reed plan is one end per dent. If the weft crimp is 8% then calculate the warp sett in the fabric on cloth roller.

A simple weight lever system at each end of a loom beam is provided with weights of 500 N. The leverage of the system (y/x ratio) is 4:1. The full beam radius is 75 cm and the ruffle radius is 15 cm. If the ropes are given 0.5 lap around the ruffles and the warp tension at the slipping point is 435 N, then determine the coefficient of friction between ruffle and the rope. (2+3)