

xv) Discuss the characteristics of a good sized yarn.

### SECTION-C

**Note:** Long answer type questions. Attempt any three questions.  $3 \times 10 = 30$

- Q.3 Discuss the different types of drafting plans used with an example of each type.
- Q.4 Explain the working principle of pirn winders with a neat labelled figure. Also discuss the 2 common defects and their remedies.
- Q.5 Discuss the working mechanism of a sectional warping machine. Also mention the common package defect and their remedies.
- Q.6 Determine the number of cones and warpers beams required to produce 30,000 meters from the following data.  
Yarn mass in cone = 2.5 kg  
Yarn Count = 30 (warp and weft)  
EPI=80 and PPI=60  
Beam capacity=500kg  
Fabric width=1meter
- Q.7 Discuss the different types of binders used for sizing. Also suggest a typical recipe for a polyester spun yarn.

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### 3rd Sem. / Textile Design

### Subject : Fabric Manufacture-I

Time : 3 Hrs.

M.M. : 100

### SECTION-A

**Note:** Very Short Answer type questions. Attempt any 15 parts.  $(15 \times 2 = 30)$

- Q.1 a) In which type of packages sloughing off occurs.
- b) Which input package is used for weft winding?
- c) State one demerit or random winding machines.
- d) Which type of warping machine is preferred for yarn dyed fabrics?
- e) Which component is used to eliminate the thin place in a conventional winding machine?
- f) Define tape length.
- g) What is the definition of heald count?
- h) State the preferred application area of sectional warping machines.
- i) State the advantages of V shape creel used for warping machines.

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- j) How elongation of yarn changes after sizing?
- k) What is the definition of size Add On%?
- l) State the function of Read Count in Metric System.
- m) What is the function of tensioner on pirn winding machine?
- n) What is the function of squeezing roller in slasher sizing machine?
- o) Which type of binder is preferred for the sizing of 100% cotton yarns?
- p) What is the role of Lease Rods in indirect warping machines?
- q) Which component is used to control the balloon in pirn winding machines?
- r) What is gaiting up?

### SECTION-B

**Note:** Short answer type questions. Attempt any ten parts

10x4=40

- Q.2
- i) Discuss the objectives of warp winding process.
  - ii) How Patterning is related with traverse ratio.
  - iii) What is denting? Also discuss the precaution taken for denting.
  - iv) Discuss the reasons of sloughing off in a cone.

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- v) Discuss the procedure of gaiting up process.
- vi) Derive the relation between Size Pick-up and Size Add-on from their definitions.
- vii) A fabric to be produced with 8000 ends with 10 different colored stripes. Design this patterned fabric in a sectional warping machine having 600 creel capacity.
- viii) Draw the drafting plan for a 3/2 twill weave fabric.
- ix) What are the methods used for the creel changes in direct warping machines?
- x) Discuss the advantages of multi-cylinder slasher sizing machines.
- xi) Discuss the utility of Sizing and Weaving Curve for sizing process.
- xii) Discuss the methods used to avoid patterning effect in random winding machine.
- xiii) Discuss the different types creels used for the sectional warping machine.
- xiv) Calculate the production in kg/8Hour for a direct warping machine from the following data  
Drum surface speed: 1200m/min, Yarn Count: 30<sup>s</sup> Ne, Efficiency: 92%, creel capacity = 600

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