

22243

23124

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Use of Non-programmable Electronic Pocket Calculator is permissible.

Marks

1. Attempt any FIVE of the following :

10

- (a) State objectives of ginning process.
- (b) Define textile fibre. Give two examples.
- (c) State classification of Yarns.
- (d) State objectives of carding process.
- (e) Define Indirect Yarn numbering systems.
- (f) Calculate English count from following particulars :
Weight of yarn = 0.004 pound
Length of yarn = 120 yards
- (g) Draw point paper design of 5-end sateen. (single repeat)
- (h) Define size pickup percentage.



2. Attempt any THREE of the following : 12

- (a) Describe process flow chart to produce carded yarn.
- (b) Differentiate between Open end yarn and Ring yarn in terms of strength, elongation, hairiness and evenness.
- (c) Determine creel capacity of warping machine with given data :
 - No. of ends required to be sized = 4000
 - No of Beams warpers Beam required on sizing machine = 5
- (d) Draw draft, lifting plan, design & denting order of 3 up 1 down (3/1) Right handed twill.

3. Attempt any THREE of the following : 12

- (a) Describe with neat sketch a passage of yarn through ring frame machine.
- (b) Find Resultant English count of two plied yarn made from 10 Tex and 50^s Ne.
- (c) Describe objectives of any **two** processes :
 - (i) Warping
 - (ii) Sizing
 - (iii) Winding
- (d) Explain the classimat chart used to classify yarn faults.

4. Attempt any THREE of the following : 12

- (a) Explain four essential properties of textile fibre.
- (b) Describe the practical difficulties arises in measurement of yarn diameter.
- (c) Explain production method of any **two** fabrics from the following :
 - (i) Woven fabric
 - (ii) Knitted fabric
 - (iii) Braided fabric

- (d) Describe with neat sketch a passage of yarn through Direct Warping machine.
- (e) Calculate warp & weft crimp percentage from given data :

Warp length in fabric \longrightarrow 10 cm

Weft length in fabric \longrightarrow 10 cm

Extended length of warp yarn \longrightarrow 10.2 cm

Extended length of weft yarn \longrightarrow 10.4 cm

5. Attempt any TWO of the following :

12

- (a) How combed yarn is produced in spinning industry ?
- (i) Draw a process flow chart to produce combed yarn.
- (ii) Explain objectives of each process used in production of combed yarn.
- (b) Draw a process chart to produce following types of fabric :
- (i) Warp way stripe woven fabric
- (ii) Grey fabric
- (c) Suggest more compact fabric amongst fabric A & fabric B based on their cloth cover factor.

Fabric A	Fabric B
EPI – 60	40
PPI – 30	25
Warp count – 20 ^S Ne	20 ^S Ne
Weft count – 40 ^S Ne	40 ^S Ne

6. Attempt any TWO of the following :**12**

- (a) State the modern Blow loom line sequence with its components & functions.
- (b) Following are the three separate yarns :
- Yarn 'A' – 20 Tex
 - Yarn 'B' – 200 Denier
 - Yarn 'C' – 20 Nm
- (i) Convert each yarn into British count.
- (ii) Arrange them in ascending order (finer to courser).
- (c) Compare knitted fabric and woven fabric based on various fabric properties, fabric structure, method of production and uses.
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