

17225

21718

3 Hours / 100 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.

Marks

1. Answer any TEN :

20

- (a) What are objects of pirn winding ?
- (b) Define English count and Denier count.
- (c) What are objects of picking ?
- (d) Draw a shape of 2/2 shedding tappet.
- (e) State objectives of auxiliary motions. Enlist various auxiliary motions.
- (f) State objectives of take-up motion. List down various take-up mechanism used on a plain power loom.
- (g) Draw timing diagram of the primary motions.
- (h) Enlist any four fabric faults.
- (i) Explain importance of sley eccentricity.

- (j) Sketch Roller temples and Ring temples.
- (k) State function of Picker and Buffer.
- (l) State the functions of warp protecting motion.
- (m) List down various types of shedding motions.

2. Answer any FOUR :

16

- (a) Explain construction and working of non-automatic pirn winding machine with neat sketch.
- (b) Calculate dividend of seven wheel take-up motion used on a plain power loom with neat sketch.
- (c) Calculate production in kg/shift of a pirn winding machine from following data :

Spindle speed 400 rpm

Yarn count 60^s Ne

Number of spindles 30

Efficiency 90%

- (d) (i) Define Tex count.
- (ii) Calculate length of polyester filament in metres on a package of 5 kg having 210 denier.

- (e) Calculate production of loom per shift in metres.

Loom speed = 240 rpm

EPI = 120

PPI = 60

Efficiency = 82%

- (f) Differentiate between over pick and under pick mechanism.

3. Answer any TWO :

16

- (a) Explain construction and working of under picking mechanism with help of neat sketch.
- (b) Explain construction and working of negative let-off motion with help of neat sketch.
- (c) What are objects of temple motion ? Explain with neat sketch, any two types of temples. Also state functions of take-up roller.

4. Answer any TWO :

16

- (a) Describe passage of warp through a plain loom with neat sketch.
- (b) Explain construction and working of side weft fork motion with neat sketch.
- (c) (i) Convert 40^s , 60^s , 80^s , 100^s Ne to Tex and Denier.
- (ii) Find resultant count of yarn. 10^s , 20^s , 30^s and 40^s Ne.

P.T.O.

5. Answer any TWO :**16**

- (a) What are objects of beat-up motion ? Explain construction and working of beat-up motion with neat sketch.
- (b) Explain the function and care during use of storage of following loom parts :
- (i) Shuttle (ii) Buffer
- (iii) Reed (iv) Picker
- (c) (i) Give salient features of modern pirn winding machine.
- (ii) Calculate GSM of fabric from following particulars :
- EPI = 120, PPI = 80
- Warp count = 80, Weft count = 60
- Warp crimp = 8%, Weft crimp = 6%

6. Answer any TWO :**16**

- (a) Calculate the time required to finish a weavers beam having 2000 yards of warp on it. The woven fabric is required to have 60 PPI. The crimp is 7% warp way and the warp waste is 10 yards. The loom is running at 240 rpm and efficiency is 80%.
- (b) Give causes and remedies of following fabric faults :
- (i) Gouts (ii) Broken pick
- (iii) Reed marks (iv) Shuttle smash
- (c) Explain loose reed mechanism with neat sketch.
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