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3 Hours / 70 Marks Seat No. | | | | | | | | |

Instructions – (1) All Questions are *Compulsory.*

(2) Answer each next main Question on a new page.

(3) Illustrate your answer 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.

(7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

(8) Use of Steam tables, logarithmic, Mollier's chart is permitted.

Marks

1. Attempt any FIVE of the following: **10**

a) List down essential properties of a textile fiber.

b) State objectives of blow room.

c) Classify yarns used in textile industry into different categories.

d) Define 'Worsted count'. Give expression (formula) for it.

e) Define 'Denier'. Give expression (formula) for it.

f) Classify looms into different categories.

g) State objectives of sizing.

P.T.O.

Marks

2. Attempt any THREE of the following: **12**

a) Explain with the help of a flow chart working of a blow room line.

b) Give process flow chart for manufacturing of checks fabric.

c) State objectives of winding. Draw diagrams of various types of winding packages and give their specifications.

d) Explain the inter-relationship of design draft and peg-plan using plain weave.

3. Attempt any THREE of the following: **12**

a) Explain manufacturing of combed yarn with the help of a flow chart.

b) i) Define cotton count (English count) State formula for the same.

ii) A cotton yarn cone of 40^s combed yarn, weighs 2 kg. Find out the length of yarn it contains.

c) Explain the passage of warp through loom with the help of a neat labelled diagrams.

d) i) Draw design, draft and peg-plan of $\frac{2}{2}$ twill weave. State characteristics of twill weave.

ii) Elaborate the concept of crimp in the yarn. Give expression (formula) for it.

4. Attempt any THREE of the following: **12**

a) Explain manufacturing of a double yarn with the help of a flow-chart.

b) Draw diagram of a carding machine and label the parts. State objectives of carding.

c) i) Define 'Tex'. Give formula of it.

ii) A polyester filament yarn lea of 100 meter length weighs 2 gm. Calculate its tex number.

d) State objective of :–

i) Beam warping

ii) Sectional warping

iii) Drawing in and denting

iv) Pirn winding.

Marks

e) i) Draw design, draft and peg-plan of a 5 end sateen and satin weave. Differentiate them.

ii) Elaborate the concept of fabric cover factor. Give expression for it.

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

a) State objectives of a ginning machine. Explain working of a ginning machine with the help of a neat labelled diagram.

b) List down various ring frame machine elements and state their function. Explain the working of a ring frame machine with the help of a neat diagram.

c) i) Explain procedure to determine English count of a cotton yarn.

ii) A polyester yarn package of 150 Denier weighs 2 kg. Find out the length of yarn it contains.

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

a) Explain in detail various methods of producing fabric.

b) Describe passage of warp through a multi-cylinder sizing machine with the help of a neat diagram.

c) List down various primary, secondary and auxiliary motions on the loom. State objectives of each one of them.
