Use separate answer script for each group

Master of Design (M.Des.) Examination, 2018

Semester - I

Specialization in Textile & Clothing

Course – MTD-I/03

(Textile Technology)

Time: Three Hours **Full Marks: 40**

Questions are of value as indicated in the margin.

Group-A

Question No. 1 is compulsory and answer ***any three*** from the rest.

1. Choose the correct answers from the given alternatives **(*any ten*)** $10 \times 1 = 10$
   a) Which yarn is finer?
      i) $40^{S}\ N_e$ ii) b. $2/40^{S}\ N_e$ iii) c. 40 tex iv) 40 Metric
   b) Woollenisation of Jute is associated with
      i) Improved strength iii) Printing
      ii) Finishing treatment iv) Improved colour
   c) The most lustrous fabric is available from
      i) Cotton fibre ii) Wool fibre iii) Silk fibre iv) Jute fibre
   d) Among the following, the lightest fibre is
      i) Cotton ii) Polyester iii) Nylon iv) Polypropylene
   e) Which of the following fibres has highest tenacity?
      i) Cotton ii) Silk iii) Viscose Rayon iv) Wool
   f) Which of the following fabrics is not suitable for apparel designing?
      i) Cambric fabric ii) Jean iii) Crepe fabric iv) Canvass cloth
   g) Which of the following fibres is suitable to design winter fabrics?
      i) Viscose ii) Acrylic iii) Polyester iv) Nylon
   h) Is the diameter of 36^{S} Cotton yarn is twice that of 72^{S}?
      i) Yes ii) No iii) Can't be assessed iv) None of these
   i) In a reed of 64^{S} Stockport, if 2 ends are drawn per dent, e.p.i will be
      i) 32 ii) 28 iii) 64 iv) None of these
   j) Mercerisation does not improve
      i) Strength of the fabric iii) Bulkiness of the fabric
      ii) Lusture of the fabric iv) Dye uptake of the above
   k) Match the following:

i) Polyester	Mercerisation
ii) Silk	DFE
iii) Wool	Degumming
iv) Cotton	Texturizing

2. What is textile fibre? How the properties of fibre influence the designing of fabrics —— Explain with example. $4 + 6 = 10$

3. Why wool fibre is suitable in making winter garments? What are the considerations taken into account in respect of types of fibre and fabric construction for designing a summer clothing with your justification? $4 + 6 = 10$

4. State the role of binder yarn and effect yarn in fancy yarn with example. What are the differences between ordinary yarn and fancy yarn. $5+5=10$

5. Why tex system is considered as Universal yarn count system? Establish the relationship between english and tex system. $5 + 5 = 10$

6. Write short notes on (any two) the following: $5 + 5 = 10$
   a) Classification of yarn
   b) Sewing thread
   c) DFE of wool
   d) Silk Reeling

P.T.O.

Group-B

Question No. 1 is compulsory and answer ***any two*** from the rest.

1. Answer ***any ten*** (10) questions: 10 x 2 = 20
   a) Write down the names of two combined weaves and two compound fabric structures.
   b) Mention four different methods of weave representation.
   c) Write down names of four different types of drafts used in practice.
   d) What do you mean by weaving plan? What are the components of it?
   e) What is the tex equivalent of a $2/40^s$ Ne cotton yarn?
   f) Write down two commercial names each of plain and twill woven fabrics.
   g) How many sateen weaves are possible with a repeat size, R = 7? Explain.
   h) What are the different ways of producing cellular tissue effect in fabrics?
   i) Write various steps of jacquard figuring in brief.
   j) Why auxiliary motions are needed in power looms? Write names of four different auxiliary motions.
   k) Mention two major components of jacquard shedding device and their salient functions.

2. Match the following: 10 x 1 = 10

a) Diamond weave	i) Graphical method of weave representation
b) Lingoe	ii) Negative tappet shedding
c) Distorted thread effect	iii) Automatic power loom
d) Diaper weave	iv) Tubular fabric
e) Crepe weave	v) Warp tension
f) Canvas method	vi) Sponge weave
g) Back rest	vii) Mockleno weave
h) Roller Reversing motion	viii) Herringbone twill/draft
i) Automatic pirn changing mechanism	ix) Pointed twill/draft
j) One-end closed double fabric	x) Reversing motion in Jacquard
	(xi) Seamless bag

3. Show on the graph paper weaving plan of ***any two*** (2) of the following weaves, and also mention their typical end uses: 5 x 2 = 10
   a) Tubular cloth weave
   b) a suitable Weft Distorted Thread Effect
   c) Brighton Honeycomb

4. a) A loom is producing a fabric having 25 picks/cm and 30 ends/cm. Calculate loom production in metres per shift of 8 hrs, for the said loom running at 150 picks/min with 96% efficiency.
   b) Calculate areal density (in GSM) and total weight (in Kg) of the fabric with following particulars:
   Warp & weft count —— $2/40^s$ & 40^s Ne respectively,
   EPI & PPI —— 70 & 60 respectively,
   Warp & weft crimp —— 7% & 9% respectively,
   Fabric length & width —— 25,000 m & 36 inch respectively 4+6 = 10

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