THE TEXTILE ASSOCIATION [INDIA]
A.T.A PAPER-II NEW 3 YEARS EXAMINATION-2014
PART- A 2.2
PRINCIPLES OF FABRIC MANUFACTURE

Date: 25.12.2014
Marks: 100
Time: 02.00 P.M. to 05.00 P.M

Instructions:
1. Attempt any Six Questions out of which Q.1 is compulsory.
2. Answer each next main question on a new page.
3. Figure to the right indicates full marks.
4. Illustrate your answers with sketches and flow charts wherever necessary.
5. Use of non-programmable electronic pocket calculator permissible.
6. Mobile and any other communication devices are not allowed in exam hall.
7. Assume suitable data wherever necessary.

Q.1 a) Filling the blank-
   i. Individual warp ends are controlled in ___________ Shedding.
   ii. Conversion of 50 Tex to Ne count is ___________ Ne
   iii. Fast Reed is the example of ___________ mechanism
   iv. Knitting is defined as ___________
   v. Let off motion is defined as ___________

b) Match the following-
   A. Stock port system
   B. Starch
   C. Temple
   D. Sectional drum
   E. Pirm
   1. Sizing
   2. Weaving
   3. Reed count
   4. Weft winding
   5. Sectional warping

   (5)

Q.2 a) Describe the recent developments in High speed automatic warp winding machine with working principle.
   b) Calculate the angle of wind of winding machine having traversing length 15cm, no. of groves 2, and surface speed 520 mpm.

   (8)

Q.3 a) Discuss the various ingredients used in size recipe
   b) Describe the modern developments & features of sizing machine

   (8)

Q.4 a) Describe the Under Pick mechanism with suitable line diagram
   b) Discuss the functions of multiple box motion

   (8)

Q.5 Draw the design with draft & peg plan
   i. ½ Twill
   ii. 5 end Sateen
   iii. Ordinary honeycomb
   iv. Diamond

   (16)

Q.6 Discuss the following process-
   i. Beam Warping
   ii. Weft Winding

   (16)
Q.7a) Calculate the actual production in meters per hour of a loom having Picks per cm 20, efficiency 85%, EPI 132, PPI 92, and count of warp 20's & count of weft 2/15's. (08)
b) Calculate the warping machine production in meter per hour for speed 850 mpm, no. of ends 2800, efficiency 80% and warper's drum 30". (08)

Q.8 Discuss the following (16)
i. Working principle of Dobby shedding
ii. Yarn numbering system

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