THE TEXTILE ASSOCIATION (INDIA)  
G.M.T.A.(REVISED) EXAMINATION- 2019  
SECTION-B, PAPER-B-2  
FABRIC MANUFACTURE  

MARKS:100  

Date: 22.12.2019  
Time: 2.00 to 5.00 pm

Instructions:  
1. Attempt six questions out of which Q.1 is compulsory.  
2. Answer each next main question on new page.  
3. Figure to the right indicate full marks  
4. Illustrate your answer with sketches and flow chart wherever necessary.  
5. Use of non-programmable electronic pocket calculator permissible.  
6. Assume suitable data wherever necessary.

Q.1  
A  
Choose the correct answer and giving reason.  

1) In Silk Fabric weaving the beat up is done at  
   a) Close Shed  b) Cross Shed  c) Open shed  d) All above.

2) Two process involved in manufacturing of Nonwoven Fabrics are  
   a) Laying and stitching  b) Web formation and Bonding  c) Spreading and calendaring  d) None of above

3) What will be weft insertion rate in meters/min of auto loom if reed width 210 cm and loom speed 210 rpm  
   a) 1440  b) 2440  c) 441  d) 210

4) Total Number of pieces in assembly of picking tappet are  
   a) 1  b) 2  c) 3  d) 4

B  
Draw the sketch only  
1) Knitted Structure 2) 3up/1 down Twill Weave 3) 7 wheel take up

C  
Give the function of following parts  
1) Reed  2) Swell  3) Picking stick

Q.2  
A  
Give the objective of winding process. What is Patterning? How patterning can be preventing? Explain anti-patterning device.

B  
Give the objective of warping process and explain sectional warping machine in detail.

Q.3  
A  
Give the classification of type of shed. Compare semi open shed with open shed along with its advantages and disadvantages.
B Write a short note on Sizing process OR Pirn winding process (08)

Q.4 A Explain under pick mechanism and compare with over pick mechanism. (09)

B Draw the woven structure. Explain woven fabric manufacturing process in detail. (07)

Q.5 A Define Nonwoven. Give steps involve in manufacturing. Explain different bonding method use to bind the web. (10)

B Draw and give construction detail
1) Size Box 2) Shuttle Box (06)

Q.6 A Give the difference between Loose reed and fast reed warp protector motion. Explain any one in detail (08)

B Explain with neat sketch side weft fork motion in detail. (08)

Q.7 A Explain following
1) Staggering of Heald 2) Factor affecting sley eccentricity (08)

B What are the reasons for tension variation in warp sheet? Explain how tension can be control on loom using let off. (08)

Q.8 A Give Timing diagram of loom for Spun and filament weaving and explain what are the changes required in loom for filament weaving (06)

B Find the Total Production of loom shed in Kg/shift from given data. (10)

- Type of fabric: 60/40 P/V, Twill fabric
- Fabric specification (inch): 52 X 40, 36” wide
- Picks/min: 210
- Efficiency: 75%
- Number of Loom: 50

Also find out speed of bottom shaft, Dwell for picking and reed count. (Assume suitable data if required)

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