

THE TEXTILE ASSOCIATION (INDIA)

A.T.A PART III EXAMINATION – 2020

PAPER – A3.OB2

MODERN FABRIC MANUFACTURING

Date:27.12.2020

Marks: 100

Time: 10.00 am to 1.00 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 whenever 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

- Q1 Answer the following:**
- a) Name the spinning systems which is not based on Open End spinning principle? **2X10**
 - b) What is Habutai?
 - c) _____ loom creates less noise.
 - d) The term "Back doubling" in rotor spinning refers to the number of doubling applied to the fibre strand before the rotor spinning machine (TRUE/FALSE)
 - e) What is the purpose of warp stop motion?
 - f) What is the purpose of COP changing mechanism
 - g) The most popular fabric manufacturing technology is _____.
 - h) List out the objectives of warp protection mechanism.
 - i) What is the meaning of Box Mechanism?
 - j) Mention 2 types of weft fork motion.
- Q 2 Answer the following questions.**
- a) Why weft accumulators and weft measuring are essential requirement in Air-Weaving machines **6**
 - b) Explain the classification of rapier weaving machine **6**
 - c) Compare the side weft fork and centre weft fork mechanism **4**
- Q 3 What are the benefits of monitoring and control of weaving machines by microprocessor? **16****
- Q 4 Answer the following questions.**
- a) Write a note on drop box motion **8**
 - b) Explain working of warp stop motion with required sketches **8**
- Q 5 What are the different ways of Textile Quality Control? **16****
- What are the different methods of dyeing?
Write a note on 'Twistless spinning'
Write a short note on Chute feed system.
- Q6 Answer the following questions**
- a. Explain the fundamental principle of Knitting? **2**
 - b. What are three basics stitches in weft knitting? **2**
 - c. Calculate the quantity of yarn required in pound to make the warp of 1000 yard length with 500 ends. The count of yarn is 20S Ne and ignore the wastages during warping? **6**
 - d. Explain with the neat diagram the picking mechanism and explain its working. **6**

Q7 With the help of neat diagram explain about the working side weft fork mechanism 16

Q8 Answer the following questions.

a. What are the features required for a automatic power loom 8

b. Write about the necessity of automatic weft replacement mechanism and its types 8

