

THE TEXTILE ASSOCIATION (INDIA)
G.M.T.A. EXAMINATION-2020
SECTION: C PAPER –C.3
TEXTILE ENGINEERING MECHANICS

Date: 26.12.2020

Marks: 100

Time: 10.00 am to 1.00 pm

Instructions:

1. Attempt **SIX** questions out of which **Q1** is Compulsory
2. Answer each next question on new page
3. Figures to the right indicate full marks
4. Illustrate your answers with sketches and flow chart wherever necessary
5. Use of nonprogrammable electronic pocket calculator permissible
6. Mobile and any other communication devices are not allowed in the exam hall
7. Assume suitable data wherever necessary

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- Q.1** Attempt any **four** of the following: 20
- (a) Which system of drive is more economical? Chain drive or Belt drive? Explain in brief.
 - (b) Write in short, the importance of PIV gear box and how it works.
 - (c) Write in short, the factors affecting the Picking force.
 - (d) Explain in brief Cleaning efficiency of Blow Room.
 - (e) Explain yarn tension in Ring Spinning? How it is maintained?
 - (f) What is difference between velocity and Speed?
- Q.2** Explain load transmission in Conical clutch. Which type of clutch transfers have more friction; Single or multiple clutch? 16
- Q.3** How many type of cams and followers are used in Textile machines? Explain in brief. 16
- Q.4** Explain the relationship between shuttle velocity and loom Speed/productivity. 16
- Q.5** Explain Spinning parameters influencing the Spinning balloon height. 16
- Q.6** Explain the feed regulating mechanisms in Blow room and dust extraction principle. 16
- Q.7** (a) write in brief about chain and sprocket drive. How load is transmitted? 8
- (b) Write difference between spur gear and Helical gear. How load is transmitted? 8
- Q.8** Explain in detail the reasons affecting the velocity of shuttle during acceleration and retardation in the looms 16