THE TEXTILE ASSOCIATION [INDIA]
G.M.T.A. EXAMINATION – 2017
SECTION –C PAPER –C3
TEXTILE ENGINEERING MECHANICS

Date: 25.12.2017
Marks:100
Time: 10.00am to 01.00pm

Instructions: 1. Attempt six question out of which Q.1 is compulsory.
2. Answer each next main question in new page.
3. Figure to the right indicates full marks.
4. Illustrate your answer with sketches and flow chart 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 Attempt any four of the following:
(a) What do you understand by simple harmonic motions and how it is maintained?
(b) Write in short, what you understand by warp tensions and how it is measured?
(c) What is difference between speed and velocity? Explain in brief.
(d) Draw a neat sketch of different components of spur gear.
(e) Write in short, the factors affecting the picking force.

Q.2 How many types of drives are used in spinning machines?
   Explain in brief the principle of inverter drive.

Q.3 Explain the principle of differential gear drive used in speed frames and how it helps in working.

Q.4 What is meant by carding efficiency and how it is measured. Explain in brief.

Q.5 How many types of conveyors are used for transferring cotton / bales and dust in spinning. Write in details giving sketches.

Q.6 How do you control the power consumption in textile industry?
   Explain in brief.

Q.7 Explain in detail the reasons affecting the velocity of shuttle during acceleration and retardation in the looms.

Q.8 What do you understand by friction in single and multiple clutches.
   Also give the factors affecting the reasons responsible for absorption of power in clutches.