THE TEXTILE ASSOCIATION (INDIA)
G.M.T.A. (REVISED) EXAMINATION – 2015
SECTION-C - PAPER-C.3

TEXTILE ENGINEERING MECHANICS

Date: 26.12.2015   Marks: 100   Time: 10am to 1pm

Instructions:
1. Attempt SIX questions out of which Q1 is compulsory
2. Answer each next question on new page
3. Figure to the right indicate full marks
4. Illustrate your answers 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

Q1 Answer any four
   a. Write in short the principle of PIV gearbox and where it is used in Textile Machines.
   b. Write in short the different roller weighting system used in Spg machines and which in more effective.
   c. Draw a neat sketch of different component of spur gear.
   d. What are the different variable drives used in spg machines. Write in brief.
   e. Write in short the factors affecting the picking force.

Q2 a. What do you understand by static and dynamic balancing of carding machine. Explain in brief.
   b. Explain in brief the reasons affecting the velocity of shuttle during acceleration and retardation in the looms.

Q3 What do you understand by four bar linkage. Write with neat sketches.

Q4 Explain the principle of differential gear drive in speed frames and how it works.

Q5 How many type of cams and followers are used in textile machines. Explain in brief.

Q6 What is the power requirement in Textile? Explain it department wise. Write the method to reduce the power consumption.

Q7 What do you understand by S.H.M.? Explain giving examples.

Q8 What do you understand by carding efficiency and how it is measured. Explain in brief.

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