THE TEXTILE ASSOCIATION [INDIA]  
G.M.T.A. (REVISED) EXAMINATION -2014  
SECTION-C PAPER- C-3  
TEXTILE ENGINEERING MECHANICS

Date : 26.12.2014  
Marks : 100  
Time : 10.00 am to 1.00 pm

Instructions:  
1. Attempt six question out of which Q.1 is compulsory  
2. Answer each next main question on 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) Write in short, what you understand by warp tensions and how it is measured?  
(b) What do you mean by yarn tension in ring spinning? How it is maintained?  
(c) Write in brief the difference between velocity and relative velocity.  
(d) Write in short as how the speed variations is done in dual motor drive in ring spinning. What is the ideal speed difference between high speed and slow speed?  
(e) What is meant by simple harmonic motions and how it is maintained?

Q.2 Write the different types of loading normally available in spinning top arms and What are the optimum values.  

Q.3 (a) Write in short the details of chain and sprocket drive. How the load is transmitted.  
(b) Write in brief with diagram the difference between spur gear and helical gears. How load is transmitted in both cases.

Q.4 How many types of conveyors are available for transferring cotton / bales and dusts in spinning. Write in details with sketches.  

Q.5 What is the roll of yarn tensions in winding? How it is obtained in simple winding and autoconer.  

Q.6 How do you design the shedding mechanism and picking tappets?  

Q.7 Explain in brief as how the load is being transmitted in single and multiple clutches giving sketches.  

Q.8 Write is details the working principle of inverter drive in ring spinning and how the desired speeds are achieved.