THE TEXTILE ASSOCIATION (INDIA)
G.M.T.A. (REVISED) EXAMINATION – 2013
SECTION-C PAPER-III (C-3)

TEXTILE ENGINEERING MECHANICS

Date: 25.12.2013 
Marks : 100 
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 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 : 

i. Draw a neat sketch of different components of spur gear. 

ii. Write in short the importance of PIV gear box and how it works. 

iii. Which belt consumes more power? Flat belt or V belt. Explain in brief. 

iv. What is difference between speed and velocity? Explain in brief. 

v. Which system of drive is more economical? Chain drive or belt drive. Explain in short.

Q.2. What is meant by four bar linkage? Explain drawing neat sketches. 

Q.3 Explain how load is being transmitted using conical clutch. 
Which type of clutch transfers more friction? Single clutch or multiple clutch? 

Q.4. What are the different variable drives normally used in ring frames. 
Explain in brief giving merits and demerits of one over another. 

Q.5 How many types of gear drives are normally used in speed frame? 
Explain differential gear motion in brief. 

Q.6 Draw the sketches of different types of cams and followers used in textile machines explaining in brief.

Q.7 a. Write the various reasons affecting the yarn tension in ring frame. 

b. What is meant by static and dynamic balancing of carding machine. Explain in brief.

Q.8 a. Explain in brief where the rotary filters and micro dust extractors are used in textiles machine. Also explain the advantages derived out of it. 

b. Explain the reasons affecting the velocity of shuttle during acceleration and retardation in the looms. 

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