G.M.T.A. EXAMINATION-2019
SECTION: C PAPER -C.3
TEXTILE ENGINEERING MECHANICS

Date:23.12.2019    Marks: 100    Time: 10.00 am to1.00 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

Q.1 Attempt any four of the following:  20

(a) Chain drives are mostly used in blow room why?
(b) Briefly describe PIV drive principle and mention where it is used in Textile machines?
(c) Which belt consumes more power; Flat or V belt? Explain in short.
(d) Explain in brief warp tension and how it is measured?
(e) Why parallel helical gears are used on drawing machine?
(f) What is difference between velocity and acceleration?

Q.2 What are the different combinations of motions of cams and followers used in textile and where are they used? Explain Simple harmonic motion.  16

Q.3 Draw a sketch of worm and worm wheel with labelling list down few applications of worm gears in Textile machines.  16

Q.4 Explain the operation of single and Multiple disc friction clutches with diagram  16

Q.5 Explain variable speed drive mechanisms with Cone/Stepped pulley in Blow room and Roving with sketches.  16

Q.6 Explain the factors affecting the shuttle velocity during acceleration and retardation in the loom?  16

Q.7 What is Sley eccentricity ratio? List down the advantages and disadvantages of increased sley eccentricity.  16

Q.8 Mention the power requirements for different motions/sections? List methods for reduction of power consumption.  16