THE TEXTAILE ASSOCIATION (INDIA)
G.M.T.A. (REVISED) EXAMINATION-2014
SECTION-A PAPER-(A-4)
GENERAL ENGINEERING

Date: 25-12-2018 Marks: 100 Time: 10 a.m to 1pm

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 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 a) Attempt any four of the following (20)

a. Differentiate between thermodynamics and heat transfer
b. Briefly, explain the working principle of Pelton wheel
c. Briefly, explain the working principle of axial flow pump
d. Explain Planck's law of radiation
e. List the applications of diesel power plant and explain in brief

Q.2 Explain different modes of heat transfer and also explain laws governing to it (16)

Q.3 (a) Define fin and briefly explain different types of fins (8)
(b) What do you mean by compounding and explain pressure velocity compounding in steam turbines (8)

Q.4 (a) Define Heat exchanger and briefly explain the role of fouling factor and correction factor in the design of heat exchanger (8)
(b) Explain different types of Rectifiers. (8)

Q.5 Explain the construction and working principle of a stepper motor (16)

Q.6 (a) What do you understand by:

(i) Draft tube in turbine
(ii) Induction motor
(iii) LMTD
(IV) Transistor

(b) Explain velocity triangle associated with centrifugal compressor

Q.7
(a) Explain any two types of steam generators
(b) Explain the working principle of reciprocating pump

Q.8
(a) Explain Semiconductor diodes
(b) Briefly, explain critical thickness of insulation