THE TEXTILE ASSOCIATION (INDIA)
G.M.T.A. (REVISED) EXAMINATION – 2013
SECTION-A PAPER-IV (A-4)
GENERAL ENGINEERING

Date: 26.12.2013
Marks: 100
Time: 10 am to 1 pm

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. What is meant by draft in the boiler? Explain in brief.

ii. How many types of prime movers are used for generators?

iii. Write the different modes of fuels and ash handling.

iv. Write the main difference between centrifugal pump and axial flow pump.

v. How do you compare the specific speed of hydraulic turbines? Write in brief.

Q.2. Explain how the Francis turbine works.
Also draw the velocity triangles and its force analysis.

Q.3. Write the different reasons affecting losses in the centrifugal pump.
How these losses can be overcome.

Q.4. How many types of different compressors are normally used in textile.
Which type is more efficient? Explain in brief.

Q.5. Write the working principle of steam turbine. Which type of turbine in more economical? Steam or water, explain in brief.

Q.6. Write the different modes of heat transfer explaining in brief their uses in textiles.

Q.7. How many types of steam generators are available in the industry and explain their merits and demerits.


b. Explain how the inverter drive works in textile machines.

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