THE TEXTILE ASSOCIATION [INDIA]

GMTA EXAMINATION - 2016

SECTION - A PAPER - A4

GENERAL ENGINEERING

Date: 26.12.2016

Marks: 100

Time: 10.00 am to 01.00 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.

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Q. 1

Attempt any four of the following -

(a) Explain in brief the different modes of heat transfer?
(b) Explain Kirchhoff's current law and voltage law in brief.
(c) Explain in brief the governing of Pelton wheel.
(d) Explain in short the Newton's Law of cooling and significance of heat transfer co-efficient.
(e) How many types of fuels are used in steam power plant? Explain in brief.

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Q. 2

Explain the principle of Pelton wheel analyzing the force and power generation.

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Q. 3

How do you classify the pumps? Explain the difference between them giving examples.

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Q. 4

Explain the working principle of steam turbine. Which types of turbine is more economical: steam or water? Why?

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Q. 5

Write the principle of DC motors in short. Explain the advantages and disadvantages of DC over AC motors.

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Q. 6

(a) Write the principle of synchronous motors and explain its working.
(b) What is difference between accessories and mountings of boilers. Give examples.

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Q. 7

(a) Write is short the testing and characteristics of fluid machinery.
(b) How do you differentiate the specific speeds of hydraulic turbines. Explain in brief.

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Q. 8

How many types of different compressors are normally used in textiles? Which type is more efficient and why?