Total No. of Questions : 8] *[Total No. of Printed Pages : 2*

Roll No .....

ME-6005 (3) (CBGS)

B.E. VI Semester

Examination, May 2018

Choice Based Grading System (CBGS)

Power Plant Engineering

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Discuss the working principle and application of MHD (Magneto Hydro Dynamic) Convertor. 10
   b) How a fuel cell is different from a battery? 4

2. a) What are the different types of cooling towers? Discuss any one. 8
   b) What are the effects of climatic factors on station and equipment design? 6

3. a) What is internal treatment of feed water? 7
   b) What is the principal requirement of fuel handling plant? 7

4. a) State the importance of nuclear power in India. 7
   b) Define the term: Radio Activity, Moderators and Binding energy concept. 7

5. a) Explain binding energy concept and mass defect. 7
   b) Calculate the mass defect and binding energy per nucleon of oxygen. Given m_p =1.007277 amu, m_n =1.008665 amu, m_e = 0.00055 amu atomic mass of oxygen =15.99491 amu. 7

6. a) Discuss the parameters on which the selection of site for a hydraulic power plant depends. 7
   b) Explain hydrography. What are mass curves? How they are plotted? 7

7 Explain the following terms. 14
   a) Diversity factor.
   b) Plant factor and their influence on plant design.
   c) Economic performance and tariffs.

8. Write short notes on the following: 14
   a) Energy conversion.
   b) Power plant economics.
   c) Fission and fusion reactions.
   d) Load factor.
   e) Micro and pico hydro machines.

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