

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) Converter. 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

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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