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MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL

A Constituent Institution of Manipal University

**VI SEMESTER B.TECH. (MECHANICAL ENGG.) END SEMESTER
 EXAMINATIONS, JUNE 2017**

**SUBJECT: POWER PLANT ENGINEERING [MME 4031]
 REVISED CREDIT SYSTEM**

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitably assumed.

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| 1A. | Define the following with suitable mathematical equations: | 03 |
| | (a) Load factor (b) Plant Use factor | |
| 1B. | With the help of a neat labelled diagram explain the working of a pumped storage plant. | 04 |
| 1C. | Explain the various investigations carried out during the process of site selection for a power plant. | 03 |
| 2A. | Sketch and explain the principle of overfeed stoker. | 04 |
| 2B. | With a neat sketch explain the working of Hydraulic ash handling system. | 04 |
| 2C. | Give the classification of hydro-electric plants. | 02 |
| 3A. | Sketch and explain the working of induced draught. | 04 |
| 3B. | With the help of a diagram explain the working principle of La Mont boiler. | 04 |
| 3C. | Explain the principle of nuclear fission reaction. | 02 |
| 4A. | Explain the working principle of closed cycle gas turbine plant. | 03 |
| 4B. | Explain the following : (a) Pondage (b) Catchment Area | 04 |

- 4C.** Explain any two engine starting system employed in a diesel engine plant. **03**
- 5A.** Sketch and explain the principle of Boiling water reactor. **04**
- 5B.** Explain the following: (a) Moderator (b) Control rods. **03**
- 5C.** List any three advantages and disadvantages of air cooling systems for a diesel engine plant. **03**