

**DIPLOMA IN MECHANICAL ENGINEERING
(DME)**

Term-End Examination

June, 2016

00410

BME-058 : POWER PLANT ENGINEERING

Time : 2 hours

Maximum Marks : 70

Note : Answer any seven questions. All questions carry equal marks.

1. Compare the steam power plant with the nuclear power plant and briefly describe the health hazards. 10

2. Describe and explain the different elements in a diesel power plant. 10

3. (a) Describe and give the layout of La Mont boiler.
(b) Classify various types of boilers and also discuss their relative advantages and disadvantages. 5+5

4. Explain any two injection systems used in a diesel power plant. 10
5. (a) Explain any two methods of calculating depreciation cost.
- (b) Describe briefly the economics of selection of power plant. 5+5
6. What is a cooling tower ? Describe the different types of cooling towers. 10
7. Describe the theory of operation of Pelton turbine and Francis turbine. 10
8. (a) Draw the P-V diagram of Brayton cycle and explain the working principle of an open cycle gas turbine.
- (b) Explain Gas turbine cycle with intercooling. 5+5
9. (a) Describe briefly the various types of hydroelectric power plants.
- (b) Discuss the advantages and disadvantages of a hydroelectric power plant. 5+5

10. (a) What is nuclear binding energy ? Explain briefly using a nuclear binding energy curve.

(b) Describe the advantages and disadvantages of BWR.

5+5
