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B. Tech. (Mechanical Engineering) 8th Semester

(G Scheme) Examination,

July-2022

POWER PLANT ENGINEERING

Paper-PEC-ME-412-G

Time allowed : 3 hours]

[Maximum marks : 75

**Note : Question no.1 is compulsory and attempt questions
by selecting one from each unit.**

1. (a) Discuss on types of power plant. 6×2.5=15
(b) Rainfall
(c) Coal handling system
(d) Rankine cycle
(e) Explain nuclear fission and fusion
(f) Enlist Non-conventional Power Function System.

Unit-I

2. Plot various curve for estimating steam flow and size of reservoir for hydroelectric power plant. Also compare hydroelectric power plants with others. 15

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3. Discuss the energy resources and their availability in India. Also discuss on selection of site for hydroelectric power plant. 15

Unit-II

4. Write short note on : 15
(a) Feeding and burning of Pulverized Fuel
(b) Ash handling system
5. Write working principle of gas turbine power plant. Find maximum work output and efficiency of cycle. And discuss the parameter which affects thermodynamic efficiency. 15

Unit-III

6. Write principle of nuclear energy with nuclear reactions, also discuss the India's nuclear power programme. What are the advantages and limitation, of nuclear power plant ? 15
7. Discuss performance and operating characteristics of power plants. Also discuss on economic load sharing. 15

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Unit-IV

8. Discuss and derive maximum efficiency peak curve for thermionic power generation. 15
9. Explain solar energy and discuss in details methods of solar energy utilization. 15

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