Roll No……..….. **Total No. of Printed Pages: [01]**

Total No. of Questions: [09]

B. Tech. (EE) (Semester – 5th/6th/7th)

POWER PLANT ENGINEERING

Subject Code: BEEE0-F91

Paper ID: [OE1111508]

Time: 03 Hours **Maximum Marks: 60**

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(2 marks each)**

Q1. Attempt the following:

a) What is the working principle of Benson boiler?
b) What are magneto-hydrodynamic systems?
c) How the site selection of a steam power plant is done?
d) Define run-off. What are the factors affecting it.
e) Enlist various types of tariffs.
f) What is a moderator? Name common moderator.
g) What is a solar pond?
h) What are the functions of a draft tube in hydroelectric power plants?
i) Draw a schematic diagram of an intercooled gas turbine.
j) Differentiate between two stroke and four stroke diesel engine

Section – B **(5 marks each)**

Q2. What are the methods to generate electricity from city refuge?

Q3. Define the terms :

a) Hydrology
b) Hydrological Cycle

Q4. What are the advantages and disadvantages of diesel power plant as compared to other power plants?

Q5. Explain various methods of coal handling.

Q6. What are the various methods to forecast the load requirements of a power plant?

Section – C **(10 marks each)**

Q7. How the power from solar energy can be obtained? Explain the methods in detail.

Q8. Explain the construction and working of CANDU reactor with neat diagram. What are its advantages and disadvantages?

Q9. Write short notes on :

a) ESP
b) Fuel cells