Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ME) (2011 Onwards E-II) (Sem.–7,8)

POWER PLANT ENGINEERING

Subject Code : DE/ME-1.8

Paper ID : [A3072]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

Q1 Answer briefly :

a) Enlist primary energy resources in India, from which electricity can be generated.

b) What is the function of Economiser and Air Pre-heaters?

c) Enumerate advantages and disadvantages of hydropower plants.

d) What is the function of surge shaft?

e) Define cetane number.

f) What are the desirable properties of a good moderator?

g) Give the uses of gas turbines.

h) What is a fuel cell?

i) Specify the significance of power production using Magneto Hydro Dynamic plant.

j) State the applications of diesel power plant.

SECTION-B

Q2 Define precipitation, evaporation and run-off. How these are interrelated?

Q3 Briefly, explain the working of coal handling and pulverization system in Thermal power plant.

Q4 Write Thermo-electric conversion system.

Q5 Explain working of combined Steam and Gas power plant.

Q6 Discuss advantages and limitations of Wind Power Plant.

SECTION-C

Q7 With neat sketch explain the following : (i) Low head hydro plant (ii) Pumped storage power plant.

Q8 Write note on all the important part of nuclear reactor. Describe briefly the functions of each part. .

Q9 The run off data of a river at a particular site is tabulated below :

Month	Discharge (million cu. m.)	Month	Discharge (million cu. m.)
January	30	July	80
February	25	August	100
March	20	September	110
April	0	October	65
May	10	November	45
June	50	December	30

(i) Draw a hydrograph and find mean flow

(ii) Draw flow duration curve

(iii) Find the power developed if head available is 90m and the overall efficiency is 86%. Assume each month of 30days.