

Total No. of Printed Pages:3

SUBJECT CODE NO:- H-400
FACULTY OF SCIENCE AND TECHNOLOGY
S.E. (EE/EEE/EEP)
Electrical Power Generation & its Economics
(REVISED)

[Time: Three Hours]

[Max.Marks: 80]

Please check whether you have got the right question paper.

- N.B
1. Q.no.1 from section A and Q.no.6 from section B are compulsory.
 2. Attempt any two questions from the remaining questions in each section.
 3. Assume suitable data if necessary.
 4. Figure to the right indicate full marks.

Section A

- | | | |
|-----|--|----------------|
| Q.1 | Solve any five questions: | 10 |
| | <ol style="list-style-type: none"> a) What is the function of storage and pondage in hydro power plant? b) Explain condenser used in steam power plant. c) What is the function of gate? d) What is the use of steam turbine in thermal power plant? e) Write the types of boilers . f) Write the function of electro static precipitation. g) What is the importance of coal crushing? h) Define hydrology. | |
| Q.2 | <ol style="list-style-type: none"> a) Describe how coal is handled starting from delivery of coal to final combustion stage. b) Draw the steam station layout. c) Write short note on condensers. | 05
05
05 |
| Q.3 | <ol style="list-style-type: none"> a) Write prospectus and development of nuclear power plant in India. b) Discuss function of <ol style="list-style-type: none"> 1) Surge tank 2) Penstock 3) Spill way 4) Dam c) What are the factors considered for site selection of thermal power station? | 05
05
05 |

- Q.4 a) Write the working of hydro power plant. 05
 b) Explain any one water turbine briefly. 05
 c) Write short note on water hammer and surge tank. 05
- Q.5 a) Write the main components with their function in diesel power plant. 05
 b) The mean monthly discharge for 12 months at a particular site of a river is given below. 05

Month	Discharge in million's m ³ / month
A	500
B	200
C	1500
D	2000
E	1000
F	500
G	200
H	100
I	200
J	500
K	1000
L	2000

Draw the hydrograph for the given discharge and find the average.

- c) Write short note on diesel power plant. 05

Section B

- Q.6 Solve any five questions: 10
- Write some geothermal regions
 - Define a fuel cell.
 - Write the working principle of MHD.
 - Write the methods of finding out the depreciation cost.
 - Draw sketch of incremental fuel cost curve.
 - Write application where solar energy used.
 - What is meant by base load plant?
 - Write various sources of energy.

- Q.7 a) Write method of improving efficiency of gas power plant. 05
 b) Write the components of gas power plant with their functions. 05
 c) Write use of inter cooler, regenerator and reheater in gas turbine plant. 05
- Q.8 a) Draw only the arrangement of a closed cycle gas turbine plant. 05
 b) Explain the MHD plant. 05
 c) Write short note on Tidal power generation. 05
- Q.9 a) List the various constraints of economic generation. 05
 b) What are the drawbacks in selecting a single unit to meet maximum demand? 05
 c) Explain how is reduction of cost done by using interconnecting generators. 05
- Q.10 a) Write short note on cost of electrical energy. 05
 b) Explain comparison of all power plants. 05
 c) What is the importance of solar power in the present energy uses in the world? 05