

Roll No.

--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(EE) (2011 Onwards)/(Electrical & Electronics)/(Electronics & Electrical)
(2011 & 2012 Batch)/(Electrical Engg. & Industrial Control) (2012 Onwards)
(Sem.-4)

POWER PLANT ENGINEERING

Subject Code : BTEE-406

Paper ID : [A2021]

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
- a) What is the function of air-preheater and reheater in a thermal power plant?
 - b) Explain governor control used in thermal plants.
 - c) Explain essential features of a hydro-electric power plant.
 - d) Describe mass defect and fertile material.
 - e) What do you understand by Celane number and supercharging?
 - f) Explain open and close cycle operation of gas turbines.
 - g) Explain essential features of remote and automatic control of hydro-stations.
 - h) What are the different kinds of nuclear reactions? Explain their applications.
 - i) What are the advantages of combined operation of plants?
 - j) How coordination between different type of power plants is achieved?

SECTION-B

- Q2. Give classification of steam generators. How selection of a steam generator is I made?
- Q3. Describe Rankine cycle and regenerative cycle.
- Q4. What are the different kinds of water turbine available for hydro power plants? Explain the selection procedure.
- Q5. What is a combustion system? Explain fluidised bed combustion.
- Q6. Explain sources of pollution from thermal and nuclear power plants. What are the remedial actions to be taken?

SECTION-C

- Q7. a) Draw layout of a hydro power plant.
- b) Explain a gas turbine cycle and its calculations. What thermal refinement is applied to a gas turbine cycle?
- Q8. Describe the classification of IC engines. Also explain main parts, operation and layout of a diesel power plant.
- Q9. What are the main parts and working of a nuclear power plant with the help of its layout? What are the various safety measures taken?