

B.E.Sixth Semester (Power Engineering) (C.B.S.)
Power Generation Technology & Regulatory Issues

P. Pages : 2

Time : Three Hours



NKT/KS/17/7424

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
 2. Solve Question 1 OR Questions No. 2.
 3. Solve Question 3 OR Questions No. 4.
 4. Solve Question 5 OR Questions No. 6.
 5. Solve Question 7 OR Questions No. 8.
 6. Solve Question 9 OR Questions No. 10.
 7. Solve Question 11 OR Questions No. 12.
 8. Due credit will be given to neatness and adequate dimensions.
 9. Diagrams and chemical equations should be given whenever necessary.
 10. Illustrate your answers whenever necessary with the help of neat sketches.

1. Explain the process of generating power from coal with the help of a neat diagram. 14

OR

2. Explain the following in brief.

- a) Pithead and Load center powerplants with suitable examples. 4
- b) Captive power plants- options, advantages & constraints. 7
- c) Types of captive power plants normally found in India. 3

3. a) Discuss the advantages of combined cycle power plants and how are they relevant to the present day Indian energy scenario. 7

b) Discuss the cogeneration power plants with suitable examples. 6

OR

4. Explain the process of Gas Turbine (GT) Steam Turbine (ST) combined cycle power generation with suitable diagrams. 13

5. Explain hydro power plant with neat sketch? Discuss its advantages & disadvantages? 13

OR

6. a) Classify hydropower plants. 8

b) Explain the pumped storage power plants with suitable example. 5

7. What is a CANDU – Type Reactor? Explain CANDU with a diagram along with its main features what is a Calandria? 13

OR

8. a) Explain the Boiling Water Reactor (BWR) with a schematic diagram. **6**
b) Explain the Gas cooled Reactor with a schematic diagram. **7**
9. a) Explain the application of Diesel Engines in power generation field. **7**
b) List out the advantages & disadvantages of Diesel Engine Generating power plants. **6**

OR

10. Explain the various systems of Diesel Engine Power plant with schematic diagrams. **13**
11. a) Explain the structure of Indian power sector. **7**
b) List out the salient features of Indian Electricity Act, 2003. **7**

OR

12. Explain the following in short.
- a) Concept of open access. **5**
b) Availability Based Tariff (ABT). **4**
c) Concept of power Trading. **5**
