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Total No. of Questions : 09

B.Tech. (EE/EEE) (Sem.–6)

POWER PLANT ENGINEERING

Subject Code : ME-352

Paper ID : [A0423]

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 has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

1. **Write briefly :**

a) What is the function of Draft tube?

b) What is water hammer?

c) Name the different boiler accessories.

d) Discuss the term Celane Number.

e) What is gas analysis?

f) Draw the pneumatic ash handling system.

g) How will you classify IC engine?

h) Name the four reactors used in nuclear power plant.

i) Name two thermal and two hydro power plant of India with their states.

j) What is the significance of Feed Pumps?

SECTION-B

2. (a) Classify hydro plants based on :

i. Plant capacity

ii. Construction and operation

iii. Head of water available.

Give the example of hydropower plant in

(b) What is meant by cavitations? Where do can it be avoided?

3. Describe the closed cycle gas turbine plant. closed cycle ?

4. Sketch and describe the followings :

(a) Cinder Catcher

(b) Fly Ash Scrubber

5. What is the difference between water tube and the working principle of Cocharan Boiler.

6. How will you classify IC engine? Describe the two stroke and four stork cycle diesel engi merits and demerits.

SECTION-C

7. Two boilers one with superheater and other applying equal quantity of steam into a comm the steam from the boiler with super heate steam in the main is 260°C. if the pressure i 15 kg/cm² and the specific heat of superheate

(a) The quality of steam supplied by the boiler

(b) Why economizers are essentially used irres boiler furnace?

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8. (a) What do you understand by paramagnetic effect? How is it used to measure O_2 in the exhaust gases?

   (b) What are the different methods of measuring nuclear radiations? Explain.

9. Write short notes on :

   (a) Cyclone Burner

   (b) Solid Waste Disposal

   (c) Electrostatic Precipitator