

SECTION-D

Note: Long answer questions. Attempt any two questions out of three Questions. (2x8=16)

- Q.23 Explain the different surveying methods which are used in hybrid, nuclear and wind power plants for power generation.
- Q.24 How speed, vibration, pressure and shell temperature can be monitored and controlled.
- Q.25 Explain the different methods to control the combustion in a boiler.

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Roll No.

4th Sem.

Branch : Instrumentation & Control

Sub. : Power Plant Instrumentation

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (6x1=6)

- Q.1 In regenerative cycle feed water is heated by ____.
- a) Exhaust gas
 - b) Heaters
 - c) Draining steam from the turbine
 - d) All of the above
- Q.2 Compounding of steam turbine is done for
- a) Reducing the work done
 - b) Increasing the rotor speed
 - c) Reducing the rotor speed
 - d) Balancing the turbine
- Q.3 India's first nuclear power plant is situated in
- a) Tarapore
 - b) Kota
 - c) Kalpakkam
 - d) None of the above

Q.4 Solar thermal power generation can be achieved by

- a) Using focusing collector or heliostates
- b) Using flat plate collectors
- c) Using a solar pond
- d) Any of the above system

Q.5 Economiser is used to heat

- a) Air
- b) Feed water
- c) Flue gases
- d) All of the above

Q.6 Size and cost of installation depends upon

- a) Average load
- b) Maximum demand
- c) Square mean load
- d) Square of peak load

SECTION-B

Note: Objective/Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Define Iron losses in a transformer.

Q.8 What is chromatography?

Q.9 Write the applications of power plant.

Q.10 What is the use of correction factor?

Q.11 What is the need of lubricant oil?

Q.12 What is the use of dust monitor?

SECTION-C

Note: Short answer type Questions. Attempt any eight questions out of ten Questions. (8x4=32)

Q.13 Write down the theory about the boiler using piping and instrumentation designing diagram.

Q.14 How current and voltage parameters are measured in power plants?

Q.15 What are the effects of steam pressure and steam temperature in power plants.

Q.16 What is radiation detector and how it is useful in power generator?

Q.17 How different parameters can be analyzed using flue gas analyzer?

Q.18 What do you understand by PH level of a material and how it is measured with the help of PH meter?

Q.19 What are the instruments which are used to monitor the pollution level during power generation?

Q.20 Interlocks are used during boiler operation. Why?

Q.21 Write a comparison between main steam and reheat steam temperature control process and their uses.

Q.22 What is the need of cooling system, explain its procedure with proper diagram?