

833

October 2023

Time – Three hours
(Maximum Marks: 100)

- [N.B. 1. Answer all questions under Part-A. Each question carries 3 marks.
2. Answer all the questions either (A) or (B) in Part-B. Each question carries 14 marks.]

PART – A

1. What is meant by superheated steam?
2. Define boiler efficiency.
3. State any three important parts of a steam engine.
4. How is steam condenser classified?
5. How air compressors are classified?
6. What are the advantages of open cycle gas turbine?
7. What are the desirable properties of refrigerants?
8. What is meant by dew point depression?
9. State the advantages of Fluidised bed combustion.
10. List out advantages and disadvantages of CANDU type reactors.

[Turn over.....

PART – B

11. (a) Steam at 20bar and 300°C passes through a pipe at the velocity of 120m/s. If the steam flows at the rate of 500 kg/hr, find the necessary diameter of the pipe.
(Or)
- (b) Describe the working of spring loaded safety valve and high steam and low water safety valve with neat sketches.
12. (a) Explain the pressure velocity compounding of steam turbine with suitable sketches.
(Or)
- (b) Explain with neat sketch, the working of central flow type surface condenser.
13. (a) Explain the construction and working of roots blower and vane type blower with sketches.
(Or)
- (b) Explain the working of turbojet engine with sketch.
14. (a) Explain about vapour absorption refrigeration system with neat sketch.
(Or)
- (b) Explain sensible cooling and dehumidification processes with sketches.
15. (a) Describe the layout of thermal power plant.
(Or)
- (b) Explain boiling water reactor with neat sketch.
