

21B
4/11/15 FN

Reg. No. :

Question Paper Code : 21521

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2015.

Seventh Semester

Electronics and Instrumentation Engineering

EI 2021/EI 701/EI 1001 A/10133 EIE 21 — POWER PLANT INSTRUMENTATION

(Common to Instrumentation and Control Engineering)

(Regulations 2008/2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define cogeneration.
2. What is the advantage of Hydro power plant?
3. What are the different types of orifice?
4. Define stagnation point.
5. Name the different parts of gas chromatography.
6. What is the need for pollution monitoring instruments?
7. What are the types of super heater?
8. What are the requirements to be considered for firing due to load change?
9. Name the sensors used in measuring vibration.
10. What is the use of auxiliary steam?

PART B — (5 × 16 = 80 marks)

11. (a) Briefly explain the importance of instrumentation in nuclear power plant.

Or

- (b) Explain the applications of cogeneration in power plant.

12. (a) Explain in detail about the Electrical and non electrical parameters measured in a power plant.

Or

- (b) Write down the operating principle of Smoke density measurement.

13. (a) Describe in detail about the flue gas O_2 analyzer.

Or

- (b) Explain dissolved oxygen analyser with neat diagram.

14. (a) What are the two basic types of aerator? Explain any one in detail.

Or

- (b) Explain the methods of measurement of combustion air flow.

15. (a) Write short notes on speed and vibration monitoring with control.

Or

- (b) Describe in detail about cooling system used in thermal power plant.
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