

G 1672

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Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2016

Eighth Semester

Branch : Applied Electronics and Instrumentation Engineering/Electronics and Instrumentation Engineering/Instrumentation and Control Engineering

AI 010 801/EI 010 801/IC 010 801—INSTRUMENTATION SYSTEM DESIGN (AI, EI, IC)

(New Scheme—2010 Admission onwards)

[Regular/Supplementary]

Time : Three Hours

Maximum : 100 Marks

Part A

*Answer all questions.
Each question carries 3 marks.*

1. Write short note on Thermistor.
2. Give short note on Enunciators.
3. Explain about sensitivity of Bourden gauges.
4. Write about process flow sheets.
5. Give a brief idea about shielding.



(5 × 3 = 15 marks)

Part B

*Answer all questions.
Each question carries 5 marks.*

6. Explain strain gauge accelerometers.
7. Describe the design of on-off controllers.
8. Explain the concept of 2 and 4 wire transmitters.
9. Discuss the role of equipment engineer.
10. List out the methods of reduction of noise.

(5 × 5 = 25 marks)

Part C

*Answer all questions.
Each question carries 12 marks.*

11. Describe the linearising techniques for thermocouple and thermistor.

Or

12. Give details about design of lock in amplifier and charge amplifier.

Turn over

13. Describe open loop and closed loop current transmitters.

Or

14. Explain low level and high level annunciators.

15. Give details about design of Rotameter.

Or

16. Explain the design of Bourden tubes.

17. Describe about the preparation of instrument index and instrument specification sheets.

Or

18. Give details about the documents to be produced for preparation of instrumentation project.

19. Describe about Noise Sources and coupling mechanisms.

Or

20. Explain Autocorrelation.

(5 × 12 = 60 marks)

