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Reg. No.....

Name.....

**B.TECH. DEGREE EXAMINATION, NOVEMBER 2014**

**Seventh Semester**

Branch : Electronics and Communication Engineering

EC 010 704—ELECTRONIC INSTRUMENTATION (EC)

(New Scheme—2010 Admission onwards—Regular/Supplementary)

Time : Three Hours

Maximum : 100 Marks

**Part A**

*Answer all questions.*

*Each question carries 3 marks.*

1. Which are the performance characteristics of instrument ?
2. Compare digital encoder and optical encoder.
3. Explain the Schering bridge.
4. Explain the principle of wave analyzer.
5. Explain any one method of flow measurement.

(5 × 3 = 15 marks)

**Part B**

*Answer all questions.*

*Each question carries 5 marks.*

6. Explain the objectives of engineering measurement.
7. Explain the principle of operation of Hall effect transducer.
8. Mention different types of a.c. bridges used in measurement.
9. Explain the principle of operation of distortion analyzer.
10. Explain any one method of force measurement.

(5 × 5 = 25 marks)

**Part C**

*Answer all questions.*

*Each full question carries 12 marks.*

11. Explain the different sources of errors.

*Or*

12. Explain the static and dynamic characteristics of instruments.

**Turn over**

13. Explain the operation and principle of working of linear variable differential transformer.

Or

14. Explain the selection criteria of transducers.

15. Explain the instrumentation amplifier and its advantages.

Or

16. Explain the electrical telemetering any two type.

17. Explain the basic principle of DAS.

Or

18. Explain the principle of operation of signal analyzer.

19. Explain different methods for flow measurement.

Or

20. Explain different types of strain gauges and their application.

(5 × 12 = 60 marks)