Code: 9A02704

Time: 3 hours   Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

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1 (a) Briefly explain the reasons for systematic errors in measurement systems.
   (b) What do you understand by the terms:
        (i) Systematic errors.
        (ii) Instrumental errors.

2 (a) Explain the common forms of periodic signals with their waveforms.
   (b) What is complex form representation of periodic signal?

3   List out methods of data transmission and explain in detail.

4   Draw and explain working of complete data logging system.

5 (a) Mention a few applications of heterodyne wave analyzers.
   (b) Explain the principle and operation of basic spectrum analyzer with a neat block diagram.

6 (a) Explain how a photodiode can be used in an alarm system.
   (b) Explain the construction and principle of operation of strain gauge.

7 (a) Define gauge sensitivity and derive expression for it.
   (b) Explain the method of measurement of linear displacement using potentiometer.

8 (a) Discuss in detail about turbine meters including their advantages and limitations.
   (b) Describe pressure measurement piezoelectric transducers with neat sketches.

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