

Code :RR320402

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III B.Tech II Semester(RR) Supplementary Examinations, April/May 2011
ELECTRONICS MEASUREMENTS & INSTRUMENTATION
(Electronics & Communication Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions
All questions carry equal marks

1. (a) Classify errors and explain them.
(b) Suggests methods to minimize and eliminate errors.
2. (a) Explain the technique of measuring resistance using Wheatstone bridge.
(b) Express the unknown resistance value in terms of the other circuit elements.
(c) Compare the measuring accuracy of a Wheatstone bridge with the accuracy of an ordinary ammeter.
3. (a) Why is Wagner's additional ground connection made?
(b) Why does not this connection affect the balance conditions?
(c) What are problems associated with shielding? How they are handled?
4. (a) Give the block diagram of a multiplexed display used in frequency counter and explain briefly.
(b) What is meant by long term and short-term stability of a crystal?
5. (a) Explain the difference between the internal graticules and external graticules.
(b) Explain the functional block diagram of the vertical deflection system in detail.
6. (a) Explain the FM recording method.
(b) Write short notes on X-Y Plotters.
7. (a) Where are piezoelectric transducers mainly used and why?
(b) Give the equivalent circuit of a crystal and explain how a crystal is used as a transducer?
(c) Explain the construction and working of strain gauge.
8. (a) Show with an example, how the capacitive transducer has excellent frequency response?
(b) What is temperature co-efficient of resistor? Explain in detail.
