Code: 9A04604

**R09**

B.Tech III Year II Semester (R09) Supplementary Examinations December/January 2014/2015

**ELECTRONIC MEASUREMENTS & INSTRUMENTATION**

(Electronics and Communication Engineering)

Time: 3 hours Max Marks: 70

Answer any FIVE questions

All questions carry equal marks

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1 (a) Explain the methods of obtaining a DC instrument and AC instrument from a basic meter.

(b) A basic D' Arsonval movement with a full scale deflection of 40 μA and internal resistance of 400 Ω is used as a voltmeter. Determine the value of the multiplier resistance needed to measure a voltage range of 0-10 V.

2 (a) What are audio frequency (A.F) signal generators?

(b) Explain the working of Wien bridge oscillator with a neat sketch.

3 (a) Define a distortion analyzer.

(b) State the working principle of a distortion analyzer.

4 (a) Differentiate active probes and passive probes.

(b) What are attenuators? What is a compensated RC alternator?

5 (a) Discuss the advantages and disadvantages of analog and digital type of oscilloscope.

(b) Describe an overview of applications of a CRO.

6 With neat sketch explain the measurement of unknown inductance by using Hay's bridge. What are the advantages and limitations of it?

7 (a) Write a short note on pressure transducers.

(b) Explain the working principle of pyrometer.

8 Give the constructional features of X-Y recorders. State its applications.

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