Roll No.

Total No. of Pages: 02

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B.Tech.(ETE / ECE / Electronics & Computer Engg.) (2011 Onwards) B Tech.(Electronics Engineering) (2012 Onwards)

(Sem.-4)

ELECTRONICS MEASUREMENTS AND INSTRUMENTATION

Subject Code: BTEC-404 Paper ID : [A1192]

Time: 3 Hrs.

Marks: 60

INSTRUCTIONS TO CANDIDATES:

- SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks
- SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
- SECTION-C contains THREE questions carrying TEN marks each and students

Q1) Write briefly:

- a. Differentiate the terms accuracy and precision.
- b. State the three types of systematic errors, giving examples of each.
- What is the use of chopper in micro voltmeter?
- State the principle of operation of galvanometer.
- What is the difference between the operation of fixed and variable AF oscillators?
- Define the term distortion factor.
- What is the difference between active and passive transducers?
- Define a strain gauge.
- Why is it necessary to use pre-amplification and filtering before data processing?
- j. What is data transmission?

SECTION-B

- Q2) What are the different types of telemetry systems? Enlist the various applications of telemetry.
- Q3) What are the important factors that decide the configuration and subsystem of a Data Acquisition System?
- Q4) Describe the essential difference between a variable reluctance type of transducer and an LVDT.
- Q5) Compare the measuring accuracy of a Wheatstone bridge with the accuracy of an ordinary ohmmeter.
- Q6) Explain the functions of various controls on the front panel of a (RO.

SECTION-C

- Q7) Explain with the help of neat circuit diagram, the working of a dual slope DVM. What are the advantages of dual slope over Ramp type DVMs?
- Q8) What is the difference between a wave analyzer and a harmonic distortion analyzer? What are spectrum analyzers commonly used for? Explain its applications.
- Q9) Explain the minimum of five specifications that should be considered while selecting a recording instrument. What is the difference between an indicator and recorder?