Exam.Code:0927
Sub. Code: 6574

2074

B.E. (Electronics & Comm. Engineering)

Third Semester

EC-306: Electronics Measurement and Instrumentation

Time allowed: 3 Hours **Max. Marks: 50**

NOTE: ***Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit. Draw the diagrams wherever required.***

x-x-x

1. Answer the following:-
   a) What is a bridge circuit and what are its advantages?
   b) Define Transducer? What are the various characteristics of a transducer?
   c) Write applications of Spectrum Analyzer.
   d) What is dynamic error? Plot it with respect to time delay.
   e) List the standard specifications of a CRO (5x2)

UNIT - I

2. Write notes on the following:-
   a) Series type Ohmmeters.
   b) Shunt type Ohmmeters. (5+5)

3. a) Draw the block diagram of a simple CRO and describe its parts.
   b) How measurement of frequency is made with the help of a CRO. (5+5)

4. Discuss various Errors in Measurements, how these errors can be minimized. (5+5)

UNIT - II

5. a) How Virtual instrumentation is better than traditional instrumentation. Create a VI to convert a binary number to decimal number using for loop.
   b) Explain local and global variable with an example. (6+4)

P.T.O.

6. a) Explain the working of LVDT in detail.

   b) An AC LVDT has the following data: Input=6.3V, output=5.2V, range ±0.5in. Determine (i) The output voltage vs core position for a core movement going from +0.45in to -0.30in (ii) The output voltage when the core is -0.25in from the centre. (5+5)

7. a) Give differences in active and Passive transducers.

   b) How cardiovascular measurements are made by use of sensors? (5+5)

x-x-x