Total No. of printed pages = 2

ET-402/ET&M/4th Sem/2013/N

ELECTRONIC TEST AND MEASUREMENTS

Full Marks – 70

Pass Marks – 28

Time – Three hours

The figures in the margin indicate full marks for the questions.

Answer any *five* questions.

1. (a) With neat diagram, explain the working of a cathode ray tube (CRT). 10

   (b) What is a digital storage oscilloscope (DSO) ? 4

2. (a) Explain how the focussing of an electron beam can be achieved in a CRO. 7

   (b) Explain how the frequency and phase of a signal can be measured in a CRO. 7

3. (a) What is the application of a function generator ? Draw a block diagram and explain its working principle.

[Turn over

(b) Discuss the principle of working of a wave analyzer. 2+7+5=14

4. What do you understand by distortion of a signal ? Explain with reference to distortion factor and describe a method of measuring total harmonic distortion of a signal. 5+9=14

5. Define spectrum analysis. Discuss the functioning of a spectrum analyzer giving a neat block diagram. 4+10=14

6. (a) Explain the construction and working of an electronic multimeter. 7

(b) Discuss the working of a basic digital frequency meter. 7

7. Write short notes on any *two* : 7×2=14

(i) IEEE - 488 bus interface

(ii) Pulse generator

(iii) Bolometer

(iv) Data acquisition.