

Total No. of printed pages = 2

Et-402/ET&M/4th Sem/2017/M

## ELECTRONIC TEST AND MEASUREMENT

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) Draw and label different parts of CRT of a CRO.
- (b) Draw the block diagram of a general purpose CRO. 8+6=14
  
2. (a) Name six front panel controls of a CRO.
- (b) Draw Lissajous pattern when two signals are :
  - (i) in phase with each other
  - (ii)  $30^\circ$  out of phase with each other
  - (iii)  $90^\circ$  out of phase with each other
  - (iv)  $180^\circ$  out of phase with each other.6+8=14

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3. Draw a block diagram of signal generator and explain its working principle. 14
4. Draw a block diagram of function generator and explain its working principle. 14
5. (a) What is total harmonic distortion ? Derive an expression for it.
- (b) Explain the working principle of a distortion meter.  $6+8=14$
6. What is a spectrum analyzer ? Discuss briefly about an spectrum analyzer. 14
7. Write short notes on any *two* :  $2 \times 7 = 14$
- (a) Bolometer
  - (b) Signal analyzer
  - (c) Dual trace CRO
  - (d) IEEE standard.