(3rd-IV) / Electronic Instruments / 5.11.2012 ✓ Bio

AGJ-2nd half (J)-12-46

(Biom) 21/12/12

Con. 11002-12.

KR-7607

(3 Hours) [Total Marks : 100

N.B. : (1) Question No. 1 is **compulsory**.
(2) Attempt any **four** questions out of remaining **six** questions.
(3) **Figures** to the **right** indicate **full** marks.

1. (a) State the performance characteristics of DVM. 5
(b) Draw and explain peak reading voltmeter 5
(c) Explain ink-jet writing system. 5
(d) What is LCD display system ? 5

2. (a) What are lissajous patterns ? Explain with suitable diagrams how it can be used for measurement of frequency and phase, state the limitations. **10**
(b) Draw and explain multi-channel data acquisition system. **10**

3. (a) Explain with diagram working of successive approximation type DVM state advantages and limitations. **10**
(b) What is Period Measurement and Ratio Measurement in a digital frequency meter ? **10**

4. (a) Describe in detail analog phase meter. **10**
(b) Find the response of first order system to step and ramp input. **10**

5. (a) Draw the block diagram of dual trace C.R.O. and explain each block. **10**
(b) Explain R-2R ladder technique of digital to analog conversion. **10**

6. (a) Draw and explain function generator with diagrams. **10**
(b) Explain following w.r.t. CRO – **10**
(i) Post deflection acceleration
(ii) ALT/CHOP
(iii) Triggering
(iv) Focus and Intensity
(v) Time/Div and Volts/Div.

7. Write short notes on (any **three**) :- **20**
(a) Intensity and velocity modulation
(b) Dual slope integrating type DVM
(c) Multimeter
(d) True RMS voltmeter.
