

T. E. (Electronics) (Sem V) (Rev) ~~24/11/06~~ 24/11/06  
Electronics Measurements Instrument.  
[ REVISED COURSE ]

CON/4611-06.

YM-6692

( 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. Attempt any four :
- (a) Explain Z-modulation in CRO. 5
  - (b) What are different characteristics of Op-Amp and give typical values for IC 741C Op-Amp. 5
  - (c) What are merits of Electronic Voltmeter over conventional type Analog Voltmeter. 5
  - (d) Explain need of delay line in CRO. 5
  - (e) Explain factors that causes error during Q-measurement. 5
2. (a) Explain factors involved in selection of Electronic voltmeter. Explain the working of Electronic voltmeter using FET (differential) bridge with the help of neat diagram. 10
- (b) State different methods of converting Analog Signal into Digital Signal. Explain SAR technique in detail. 10
3. (a) Explain in detail the construction and working of Storage Oscilloscope. 10
- (b) What are different methods of converting digital signal into Analog Signal. Explain any one in detail. 10
4. (a) Draw block diagram of Universal Counter - Timer. Explain how frequency, Time Interval, Period, Ratio can be measured using Universal Counter - Timer. 10
- (b) Explain with the help of block diagram working of digital phase meter (flip flop) and its merits and demerits. 10
5. (a) Explain following methods for measurement of frequency using CRO - 10
- (i) Spot wheel method
  - (ii) Gear wheel method.
- (b) Explain block diagram of Pulse Generator. 10
6. (a) Explain Gate Control F/F scheme used in frequency Measurement showing waveforms at all points. 10
- (b) Explain with the help of neat diagram fastest A/D converter. Its merits and demerits. 10
7. (a) Explain the requirements of Pulse Generator. 5
- Or
- Explain factors which governs intensity of Phosphor Screen. 7
- (b) Explain Analog phase meter and its limitations. 7
- (c) Explain Dual Trace and Dual Beam CRO. 8