

B.Tech. SEM -V (E & TC Engg.) 2014 Course (CBCS) : SUMMER - 2019
SUBJECT : ELECTRONIC INSTRUMENTS AND MEASUREMENT SYSTEM

Day : Saturday
Date : 11/05/2019

S-2019-2701

Time : 10.00 AM TO 01.00 PM
Max. Marks : 60

N. B. :

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labeled diagram **WHEREVER** necessary.
- 4) Assume suitable data, if necessary.

- Q. 1 a) Describe static and dynamic properties of measurement system? (08)
b) Define Calibration? (02)

OR

- Q. 1 Describe working of Digital Multi Meter (DMM) to measure voltage, current and resistance with neat diagram? (10)

- Q. 2 Describe the following features of LCR-Q-meter - (10)
i) Working Principle
ii) Types of Q- meter
iii) Applications and Specification of LCR-Q Meter

OR

- Q. 2 Explain vector impedance meter with diagram? (10)
Q. 3 What is the principle of Universal Frequency Counter? Explain Universal Frequency Counter with necessary diagram (10)

OR

- Q. 3 Explain the operational diagram to measure frequency, period and multiple periods averaging of signal using Digital Universal Frequency Counter? (10)
Q. 4 a) Differentiate between analog CRO and digital CRO? (05)
b) How automatic measurement function work in CRO? (05)

OR

- Q. 4 Draw and explain block diagram of Digital Storage Oscilloscope? Also Write its specifications and modes of operations? (10)

P. T. O.

- Q.5** Describe the following with respect to transmitter and receiver of communication measurement - (10)
- i) Sensitivity
 - ii) Selectivity
 - iii) Phase Jitter
 - iv) S/N ratio
 - v) Co- channel interference

OR

- Q.5** Define S- parameter? How S- parameters are measured using network analyzer? (10)

- Q.6** a) List down the operations performed in Lab View Software (03)
- b) Explain need of FFT analyzer in Spectrum analyzer? (07)

OR

- Q.6** a) Explain Protocol analyzer (04)
- b) Draw and explain operations of logical analyzer (06)

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