B. Tech - Sem - V, (2014 course), E&TC
winter - 2018

B.Tech. SEM -V (E & TC Engg.) 2014 Course (CBCS) : WINTER - 2018
SUBJECT : ELECTRONIC INSTRUMENTS AND MEASUREMENT SYSTEM

W-2018-2436

Day : Saturday
Date : 24/11/2018

Time : 02.30 PM TO 05.30 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)** Explain types of units and standards? **(08)**

b) What is the need of auto-zeroing? **(02)**

OR

Q. 1 What is error? Explain different types of errors and how errors can avoided? **(10)**

Q. 2 Describe in detail the following features of True RMS meter - **(10)**

i) Working Principle
ii) Block diagram and its operations
iii) Applications and Specification of True RMS Meter
iv) Conditions of coil

OR

Q. 2 Draw and Explain vector meter? **(10)**

Q. 3 **a)** How high frequency measurement is done? **(05)**

b) What are different standards for frequency generators? **(05)**

OR

Q. 3 Draw and Explain following frequency generators - **(10)**

i) Sine wave frequency generators
ii) Square wave frequency generators
iii) Triangular wave frequency generators

Q. 4 Find out V-I characteristics of transistor using Curve Tracer? Also explain function of sweep generates? **(10)**

P. T. O.

OR

Q. 4 Explain Various types of CRO probes along with its specification and applications **(10)**

Q. 5 a) Explain Network analyzer **(05)**

b) Explain SINAD test in communication measurement **(05)**

OR

Q. 5 Explain effects of EMI in communication and also explain EMI measurement and suppression techniques **(10)**

Q. 6 Explain Harmonic wave analyzer and Distortion factor meter along with specification **(10)**

OR

Q. 6 a) Explain Spectrum analyzer **(04)**

b) Explain virtual measurement and its applications **(06)**

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