

**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

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**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.
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- 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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