

**B.TECH. SEM -IV BIO MEDICAL 2014 COURSE (CBCS) :**  
**SUMMER - 2018**  
**SUBJECT: ELECTRONICS INSTRUMENTS & MEASUREMENT SYSTEM**

Day: **Thursday**  
Date: **07/06/2018**

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

**S-2018-2312**

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labelled diagrams **WHEREVER** necessary.
- 4) Use of non-programmable **CALCULATOR** is allowed.

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**Q.1** Describe with respect to digital multimeter (DMM): **(10)**

- i)  $4\frac{1}{2}$  digit DMM ii)  $6\frac{1}{2}$  digit DMM

**OR**

**Q.1** Describe the terms with diagrams: **(10)**

- i) Auto ranging ii) Auto zeroing

**Q.2** With the help of schematic diagram describe the working of vector impedance meter in detail. **(10)**

**OR**

**Q.2** Sketch functional schematic of Q-meter and describe its operation. **(10)**

**Q.3** Draw the block diagram of a function generator and discuss the method of producing sine wave. **(10)**

**OR**

**Q.3** How broad band sweep frequencies are generated using a sweep generator? Describe it with diagram. **(10)**

**Q.4** Draw and describe block diagram of dual CRO. **(10)**

**OR**

**Q.4** Discuss different CRO probes and its application. **(10)**

**Q.5** Define sensitivity, selectivity, phase jitter, S/N ratio, and co-channel interference. **(10)**

**OR**

**Q.5** What is SINAD test? Describe the operation with its block diagram. **(10)**

**Q.6** What is harmonics? Discuss Harmonic analyzer in detail. **(10)**

**OR**

**Q.6** What is spectrum analyzer? Discuss the operation with its block diagram. **(10)**

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