

**B.Tech Sem - VI (2007 Course) (E & TC Engg.) : WINTER -  
2017**

**SUBJECT : ELECTRONIC INSTRUMENT & MEASUREMENT SYSTEMS**

Day : **Wednesday**  
Date : **22/11/2017**

**W-2017-2540**

Time : **10.00 AM TO 01.00 PM**  
Max. Marks : 80

**N.B.**

- 1) Q.1 and Q.5 are **COMPULSORY**. Out of the remaining attempt any **TWO** questions from each Section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer book.
- 4) Use of non programmable calculator is allowed.
- 5) Assume suitable data if necessary.

**SECTION – I**

- Q.1**
- a) Elaborate autozeroing and autoranging facility in DMM. (05)
  - b) Which instrument would be useful to measure frequency ratio parameter? (05)
  - c) Differentiate automatic and manual test measurement. (04)
- Q.2**
- a) Which parameter could be affective to the functioning of LCR Q meter? (06)
  - b) What are the advantages and disadvantages of true RMS meter? (04)
  - c) What is the use of vector voltmeter? (03)
- Q.3**
- a) Explain heterodyne technique for the high frequency measurement. (06)
  - b) What are the time standards used for calibration? Explain them in detail. (07)
- Q.4**
- a) What is virtual instrumentation and virtual measurement? What is the use of Lab view software in virtual measurement? (08)
  - b) Explain PCI bus in detail. (05)

**SECTION – II**

- Q.5**
- a) What is the principle of distortion factor meter? Explain it with block schematic. (05)
  - b) What is the importance of communication measurement? (04)
  - c) Give overview of analog CRO (05)
- Q.6**
- a) Elaborate functioning of Digital FFT analyzer. (07)
  - b) What is protocol analyzer? What are applications of the same? (06)
- Q.7**
- a) Analyze scalar network analyzer in detail. (07)
  - b) What is the use of SINAD test? (06)
- Q.8**
- a) Explain multi trace CRO in detail (07)
  - b) What is the importance of MATH functions in DSO? (03)
  - c) What is the use of curve tracer?

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