B.TECH SEM – V (2007 COURSE) (ELECTRONICS) : SUMMER - 2018

SUBJECT: ELECTRONIC INSTRUMENTS AND MEASUREMENT SYSTEMS

Day : **Thursday** | **S-2018-2672** | Time : **10.00 AM TO 01.00 PM**
Date : **24/05/2018** | Max. Marks: 80

N. B. :

1) **Q. No. 1** and **Q. No.5** are **COMPULSORY.** Out of the remaining questions attempt **ANY TWO** questions from each section.
2) Answer to both the sections should be written in the **SEPARATE** Answer books.
3) Figures to the right indicate **FULL** marks.
4) Assume suitable data, if necessary.
5) Use of non-programmable **CALCULATOR** is allowed.

SECTION-I

Q.1	**a)**	What is 3 ½ & 4 ½ digit display?	**(05)**
	b)	Draw block diagram of frequency counter.	**(05)**
	c)	What is difference IEEE 488 standard?	**(04)**
Q.2	**a)**	Explain how time interval & ratio measurement is done in frequency counter.	**(07)**
	b)	How time stability is achieved using TCXO & OCXO.	**(06)**
Q.3	**a)**	Explain auto ranging facility in DMM.	**(07)**
	b)	Draw block diagram of LCR-Q meter & give its applications.	**(06)**
Q.4	**a)**	What is virtual instrumentation?	**(05)**
	b)	Give applications of virtual instrumentation in TDM.	**(08)**

SECTION-II

Q.5	**a)**	Define with respect to receiver in communication Sensitivity, Selectivity, Phase jitter.	**(06)**
	b)	What is wave analyzer?	**(04)**
	c)	Draw & explain block diagram of dual trace CRO.	**(04)**
Q.6	**a)**	Explain the working principle of distortion meter.	**(07)**
	b)	What is SINAD test?	**(06)**
Q.7	**a)**	Compare CRO & DSO.	**(06)**
	b)	Explain various math functions in DSO.	**(07)**
Q.8	**a)**	Explain Vector network analyzer.	**(07)**
	b)	Give basic working principle of harmonic analyzer.	**(06)**

* * * * *