

Total No. of Questions : 8]

SEAT No. :

P3656

[Total No. of Pages : 2

[4859] - 1053

B.E. (Electronics) (Semester - I)
Advanced Measurement Systems
(2012 Pattern)

Time : 2.30 Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.*
- 2) *Figures to the right indicate full marks.*
- 3) *Assume suitable data, if necessary.*

- Q1)** a) Explain in detail signal integrity design issues. [6]
b) Draw the architecture and explain in detail Logic Analyzer. State its applications. [8]
c) Explain embedded communication using CAN. [6]

OR

- Q2)** a) State and explain electrical validation and debug with MSO Series Oscilloscopes. [8]
b) Explain hardware design and testing methods of Spectrum Analyzer. [6]
c) Explain serial bus decode test instruments for USB and PCI Express. [6]

OR

- Q3)** a) Explain measurement of microwave power bridge circuit using thermistors and barraters. [8]
b) Explain single line cavity coupling system for wavelength measurement. [8]
- Q4)** a) Draw and explain the fundamental set up for advanced radar system. [8]
b) What are microwave enclosures and electromagnetic compatibility? Explain EMI and EMC measurements. [8]

P.T.O.

Q5) a) What is virtual instrumentation? Explain test system development using virtual instrumentation. [8]

b) Explain the application of TDM and PSK in instrumentation. [8]

OR

Q6) a) Explain hardware and software role in virtual instrumentation. [8]

b) Explain Lab View based Data acquisition system design. [8]

Q7) a) Explain application of counter for frequency and capacitance meter. [6]

b) What are the types of ADC and DAC? Enlist the specifications of ADC and DAC. [6]

c) Explain data loggers in detail. [6]

OR

Q8) Write short note on any three: [18]

a) Automation in digital instruments.

b) Analog mixers.

c) V to F converter.

d) Universal Counter.

