

B.Tech III Year II Semester (R13) Regular & Supplementary Examinations May/June 2017

MODERN MEASUREMENT TECHNIQUES

(Electronics and Instrumentation Engineering)

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) Define the term sensitivity.
 - (b) Classify measuring instruments.
 - (c) Explain briefly about the types of errors involved in measurement systems.
 - (d) Write the principle of digital voltmeter.
 - (e) Explain the HART protocol.
 - (f) What are the advantages of virtual instruments?
 - (g) Explain with example an array.
 - (h) Write short notes on USB.
 - (i) Write explanatory notes on RS485.
 - (j) What is motion control?

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

- 2 Explain in detail about A/D converters.

OR

- 3 Explain about Digital tachometer.

UNIT – II

- 4 What is the role of Analog input and output cards in PC-based measurement system.

OR

- 5 What are the various Computer Aided Software Engineering (CASE) tools? Why they are important in systems analysis and design?

UNIT – III

- 6 What is graphical programming? With a neat block diagram explain its functionalities.

OR

- 7 Explain the purpose of instrument drivers in VI programming.

UNIT – IV

- 8 Explain the differences between:

- (a) PCI and ISA.
- (b) VXI and PXI.

OR

- 9 Explain the differences between Modbus and GPIB.

UNIT – V

- 10 Explain various applications of Virtual instrumentation.

OR

- 11 Explain the development of process database management system.
