

B.Tech IV Year II Semester (R15) Advanced Supplementary Examinations July 2019

INSTRUMENTATION

(Electrical & Electronics Engineering)

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) What is gross error? List out different types of gross errors.
 - (b) What is the use of standard test signals?
 - (c) What is Time Division Multiplexing (TDM)?
 - (d) List out the components of analog DAS.
 - (e) What is the difference between wave analyzer and harmonic distortion analyzer?
 - (f) Specify the advantages of DVM over analog voltmeters.
 - (g) Distinguish between bonded and unbonded strain gauges.
 - (h) Name different types of photo-electric transducers.
 - (i) List out different types of flow meters.
 - (j) Explain the Seebeck effect.

PART – B

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

UNIT – I

- 2 What are sources of errors? Explain dynamic characteristics of instrument.
- OR**
- 3 What are different types of errors? Explain the use of pulse modulation and pulse code modulation in instrumentation.

UNIT – II

- 4 What are different modulation techniques used in instrumentation? Explain with neat sketches.
- OR**
- 5 Explain the different types of multiplexing systems with suitable diagrams and sketches.

UNIT – III

- 6 What is special significance of frequency selective wave analyzer? Explain its operation with neat diagrams.

OR

- 7 Explain the operation of integrating type digital voltmeter with neat sketch and example.

UNIT – IV

- 8 What is resistive transducer? Explain different types of resistive transducers with suitable sketches.

OR

- 9 List out different types of photo – electric transducers. Explain each of them with suitable diagrams.

UNIT – V

- 10 What are different types of pressure transducers? Explain them with neat sketches.

OR

- 11 Explain different types of temperature measuring transducers with suitable diagrams.
