Duration: 3hrs Max Marks: 80 Please check whether you have got the right question paper

NB: a) Question number 1 is compulsory

- b) Attempt any 3 questions from remaining questions
- c) Right hand side figures indicates marks

Que 1.Attempt any four questions

[20]

- a) Draw and Explain Components of Generalized measurement system.
- b) Explain Auto Ranging and Auto Zero Adjustments in Digital Instruments.
- c) Compare CRO and DSO.
- d) Explain Selection Criteria of Transducers.
- e) Draw and Explain Data logger.
- f) Draw and Explain Side glass tube method for level measurement.

Que 2. Attempt the following questions

[20]

- a) Explain different errors in measurement also explain how to eliminate/Reduce Errors.
- b) Draw and Explain Electronics Voltmeter using Transistors and FETs. Justify which one is suitable for voltage measurement.

Que 3. Attempt the following questions

[20]

- a) Draw and Explain Measurement of Inductance using Maxwell Bridge and Hey Bridge. Justify which one is suitable for inductance measurement.
- b) Draw and Explain Kelvin's Double Bridge for Low resistance measurement.

Que 4. Attempt the following questions

[20]

- a) Draw and Explain Experimental setup for measurement of Frequency and Phase using Lissajous Figures.
- b) Draw and Explain DSO with features like Roll, Refresh, Storage Mode and Sampling Rate also List applications of DSO.

Que 5.Attempt the following questions

[20]

- a) Draw and Explain Linear Variable Differential Transformer with its characteristics. List applications of it.
- b) Draw and Explain Rotameter for flow measurement.

Que 6.Attempt the following questions

[20]

- a) Draw and Explain Dead Weight Tester for pressure measurement.
- b) Draw and Explain PC based Instrumentation System.