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CFI1325

Electronics Measurements (New) (1080)

P. Pages : 2

Time : Three Hours

Max. Marks : 100

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answersheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Solve **any two** sub-questions from each unit.
5. Draw diagrams wherever necessary.
6. Assume suitable data if required.
7. Use of non-programmable calculators is allowed.
8. Figures to right indicate full marks.

UNIT - I

1. a) Compute self - capacitance of a coil, when following measurements are made At frequency $f_1 = 2\text{MHz}$, the tuning capacitor is set at 450pF , when frequency is increased to 5MHz , tuning capacitor is tuned at 60pF . 10
b) With neat sketch explain the working of vector voltmeter. State its applications. 10
c) Write short notes on : 10
 - i) Calorimeter method for RF power measurement
 - ii) Field Strength meter.

UNIT - II

2. a) Explain the principle of Digital frequency measurement. Also explain the operation of Digital frequency meter. 10
b) Explain with diagram : 10
 - i) Digital Tachometer
 - ii) Digital pH meter.
- c) Explain automation with reference to auto ranging, autozeroing and auto polarity. 10

UNIT - III

3. a) List various applications of vectorscope in television engineering. Draw and explain vectorscope with block diagram. **10**
- b) Describe operation of frequency selective wave analyzer with the help of block diagram and also draw its typical attenuation curve. **10**
- c) Write short note on : **10**
- i) Signature analyzer
 - ii) Wobbuloscope.

UNIT - IV

4. a) State principle of Dual beam and dual trace CRO and compare both in detail. **10**
- b) Draw block diagram and waveforms pertinent to the operation of sampling oscilloscope and explain. **10**
- c) Draw and explain the block diagram of Digital storage oscilloscope, List advantages of DSO over conventional oscilloscope. **10**

UNIT - V

5. a) Explain types of Data Acquisition system. **10**
- b) Explain Computer based testing of audio amplifier and Radio receiver in brief. **10**
- c) Write short note on : **10**
- i) Data Logger,
 - ii) Data transmission system.
