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Time : 2 Hours

ELECTRONIC AND

ELECTRICAL MEASUREMENTS

Subject Code

V	3	4	1
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Total No. of Questions : 5

(Printed Pages : 4)

Maximum Marks : 50

INSTRUCTIONS :

- (i) Answer each question on a fresh page.
- (ii) Write the number of each question and sub-question clearly.
- (iii) All questions are compulsory.
- (iv) Figures to the right indicate full marks.

1. (A) Fill in the blanks :

2

- (i) The instruments which are provided with pointer and scale are called
- (ii) In a digital frequency meter, the unknown frequency is converted into pulses using

(B) Answer the following :

6

- (i) Explain the AF signal generator with a neat block diagram.
- (ii) Explain the single phase power factor meter with a neat diagram.

- (C) Answer the following : 2
- (i) Draw a neat labelled diagram of single phase AC induction type energy meter.
2. (A) Define the following : 2
- (i) Multiplier
- (ii) pH value of a solution.
- (B) Answer the following : 6
- (i) Explain the working of Electrodynamometer type of instrument with a neat diagram.
- (ii) Explain the cup-type anemometer with a neat diagram.
- (C) Answer the following : 2
- (i) State any *four* applications of thermistor.
3. (A) Fill in the blanks : 2
- (i) The torque responsible for obtaining quick readings in measuring instruments is
- (ii) The LCR bridge is also known as

(B) Answer the following : 3

(i) Explain the meter used to measure the power in decibels with a neat block diagram.

(C) Answer any *one* of the following in detail : 5

(i) Draw a neat block diagram of CRO and explain the time base generator circuit.

Or

(ii) Explain the *five* applications of CRO.

4. (A) Answer the following : 2

(i) Give *one* point of difference between single phase energy meter and induction type wattmeter.

(ii) State any *two* precautions to be taken while handling a Megger.

(B) Answer the following : 3

(i) Explain the photoelectric transducer with a neat diagram.

(C) Answer any *one* of the following in detail : 5

(i) Explain the HVBT with a neat diagram. State any *two* uses of it.

Or

- (ii) Describe the current transformer with a neat diagram. Give *one* practical application of current transformer.

5. Answer the following : 10

- (i) Explain the calibration of dc voltmeter with a neat diagram using potentiometer method.
- (ii) Draw a neat diagram of Hay's bridge and state *one* advantage of it.
- (iii) State any *four* applications of Megger.
- (iv) Draw a neat block diagram of the voltmeter section of a digital multimeter.
- (v) State any *two* factors to be considered while selecting a transducer.