CBCS SCHEME

USN | | | | | | | | | | |

15NT44

# Fourth Semester B.E. Degree Examination, June/July 2019
## Electronic Instruments and Measurements

Time: 3 hrs. Max. Marks: 80

**Note: Answer any FIVE full questions, choosing ONE full question from each module.**



### Module-1

1 a. With the help neat diagram, explain the transistor voltmeter. **(06 Marks)**

b. Write a note on multirange voltmeter and explain how the range of a voltmeter can be extended to measure high voltages. **(06 Marks)**

c. What is meant by error? Explain the types of errors. **(04 Marks)**

**OR**

2 a. Explain in detail about RF ammeter, its types and limitations. **(08 Marks)**

b. Explain multirange ammeters with the help of circuit diagrams. **(04 Marks)**

c. Write a note on probability of errors. **(04 Marks)**

### Module-2

3 a. Explain RAMP technique mention the advantages and disadvantages. **(08 Marks)**

b. Write a note on continuous balance DVM. **(04 Marks)**

c. Explain digital $P^H$ meter. **(04 Marks)**

**OR**

4 a. Describe the working of universal counter. **(06 Marks)**

b. With diagram, explain the working of Digital multimeter. **(06 Marks)**

c. Write a note on ADC. **(04 Marks)**

### Module-3

5 a. Discuss about standard signal generator with the help of Diagram. **(08 Marks)**

b. With block diagram, explain the working of Oscilloscope. **(08 Marks)**

**OR**

6 a. With diagram, explain the principle and working of function generator. **(08 Marks)**

b. Discuss about different types of probes for CRO. **(06 Marks)**

c. Write the circuit diagram of vertical amplifier in CRO. **(02 Marks)**

### Module-4

7 a. Explain the principle and working of stroboscope. **(08 Marks)**

b. Discuss about Q-meter and state its advantages. **(08 Marks)**

**OR**

8 a. With circuit diagram, explain the principle and working of vector impedance meter. **(08 Marks)**

b. Write a note on Megger. **(06 Marks)**

c. Write the circuit diagram of Wheatstone's bridge. **(02 Marks)**

### Module-5

9 a. With neat diagram, explain the working of LVDT and mention the advantages and limitations. **(08 Marks)**

b. Explain the working of photo transistor with the help of diagrams. **(06 Marks)**

c. Mention two types of electrical transducers. **(02 Marks)**

**OR**

10 a. Write a detailed note on inductive transducers. **(08 Marks)**

b. Write a note on Photovoltaic cell. **(04 Marks)**

c. Explain optical transducer. **(04 Marks)**

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