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Question Paper Code: 54306

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Fourth Semester

Electrical and Electronics Engineering

15UEE406- ELECTRICAL MEASUREMENTS AND INSTRUMENTATION

(Regulation 2015)

Duration: 1.15 hrs

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. Measurement close to true value is CO1-R
(a) Accurate (b) Precise (c) Average (d) Error
2. The total quantity of electricity delivered in a particular time is measured by CO1-R
(a) Absolute instrument (b) Indicating Instrument (c) Recording Instrument (d) Integrating Instrument
3. Input impedance of an electronic voltmeter is CO2-R
(a) Low (b) High (c) Medium (d) Zero
4. Trivector meter is needed for measuring CO2-R
(a) Active Power
(b) Reactive Power
(c) Active and Reactive Power
(d) Active Power, Reactive Power and Total Energy
5. The principle on which a bridge circuit operates is CO3-U
(a) null indication (b) ampere's rule (c) partial indication (d) kirchhoff's laws
6. Electrical system is grounded in order to protect CO3-R
(a) Electrical equipments (b) Humans
(c) Electrical Equipments & Humans (d) Transmission lines

7. CRO stands for CO4-R
 (a) Cathode Ray Oscilloscope (b) Current Resistance Oscilloscope
 (c) Central Resistance Oscilloscope (d) Capacitance Ray Oscilloscope
8. Focusing and accelerating anodes in CRT are CO4-U
 (a) rectangular (b) cylindrical (c) spherical (d) square
9. A data acquisition system provides CO5-R
 (a) partial communication (b) ineffective communication
 (c) effective communication (d) complete communication
10. Output of smart sensors will be of CO5-R
 (a) Analog (b) Digital (c) Analog and digital (d) Analog or Digital

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Describe in detail about static and dynamic characteristics of measuring instruments. CO1-U (08)
12. Describe the construction, working of permanent magnet moving coil Instrument and derive the expression for deflection. CO2-U (08)
13. Discuss in detail the electro-static and electro-magnetic interference. CO3-U (08)
14. Describe the construction and working of magnetic tape recorder. CO4-U (08)
15. List the different functional elements of data acquisition system and discuss their associated functions in detail. CO5-U (08)

