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Question Paper Code: 52038

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

Second Semester

Civil Engineering

15UEE208 - BASIC ELECTRICAL AND ELECTRONICS ENGINEERING

(Common to Mechanical Engineering, Chemical and Agriculture Engineering)

(Regulation 2015)

Duration: 1:15hrs

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

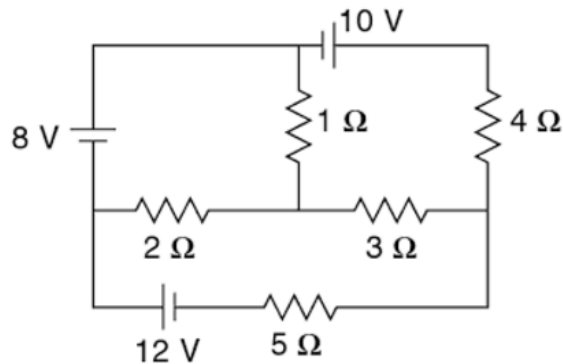
- The unit of resistivity is
 - ohms
 - ohm millimetre
 - ohm metre
 - ohm/metre
- A 240V, 60W lamp has a working resistance of
 - 1400 ohm
 - 60 ohm
 - 960 ohm
 - 325 ohm
- In case of D.C. machines, mechanical losses are primary function of
 - Current
 - Voltage
 - Speed
 - none of these
- The armature of DC motor is laminated
 - To reduce the mass.
 - To reduce the inductor
 - To reduce the eddy current loss.
 - To reduce the hysteresis loss
- Which of the following diodes is operated in reverse bias mode?
 - P-N junction
 - Zener
 - Tunnel
 - Schottky
- A Zener diode is used for
 - Voltage Regulation
 - Rectification
 - Noise Suppression
 - Blocking A.C

7. The NAND gate output will be low if the two inputs are
 (a) 00 (b) 01 (c) 10 (d) 11
8. Which of the examples below expresses the distributive law of Boolean algebra?
 (a) $A \cdot (B \cdot C) = (A \cdot B) + C$ (b) $A + (B + C) = (A \cdot B) + (A \cdot C)$
 (c) $A \cdot (B + C) = (A \cdot B) + (A \cdot C)$ (d) $(A + B) + C = A + (B + C)$
9. Radio broadcasting is a familiar example of
 (a) space multiplexing (b) time multiplexing
 (c) frequency multiplexing (d) none of these
10. A cordless telephone using separate frequencies for transmission in base and portable units is known as
 (a) duplex arrangement (b) half duplex arrangement
 (c) either (a) or (b) (d) neither (a) or (b)

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Determine mesh current of the circuit shown in below figure. (8)



12. Explain the construction and principle of operation of a DC generator with neat sketch. (8)
13. Explain in detail about construction, operation, VI characteristics and applications of PN Junction diode. (8)
14. Draw and explain the operation of AND, OR, NOT, Ex-NOR and Ex-OR gates with suitable truth table. (8)
15. Draw a neat sketch of a telecommunication system. (8)