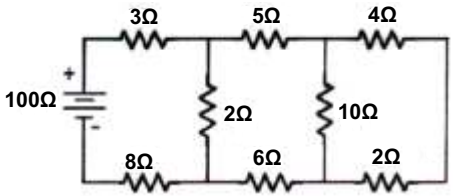
SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Find the current through each branch by network reduction technique.



Q.37 What are the various applications of Single Phase and Three Phase motors? Describe in detail.

Q.38 A 10 Ohm resistor is connected in series of 230 V 50 Hz supply. What is the

a. Peak Voltage
b. Current flowing and the power dissipated in the resistor
c. If an Inductor L=50 mH is added to the circuit in series, what is the total impedance
d. What is the current flowing in R-L circuit.
e. What is the power dissipated in AC circuit?

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187734/147734

4th Sem / Branch : Aircraft Maintenance Engg

Subject:- Elements of Electrical and Electronics Engineering-I

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 Fro making measurement, an ammeter is connected in

a) Parallel b) Series
c) Earthed d) None of the above

Q.2 Primary winding of a transformer_____

a) Is always a high voltage winding
b) Is always a low voltage winding
c) Could either be a low voltage or high voltage winding
d) Cannot be determined

Q.3 Lenz law shows

a) Magnitude of the current
b) Magnitude of the current
c) Direction of the current
d) Power factor

Q.4 Capacitor is used in

a) AC circuits b) DC circuits
c) Both d) Cannot say

Q.5 Which winding has more number of turns?

a) Low voltage winding
b) High voltage winding

c) Primary winding
d) Secondary winding

Q.6 What is the number of positive plates in a battery cell?
a) One more than the negative plates
b) Two less than the negative plates
c) One less than the negative plates
d) Two more than the negative plates

Q.7 What is the phase difference between voltage and current?
a) 90 degree b) 60 degree
c) 120 degree d) Zero

Q.8 In a star connected system, the current flowing through the line is
a) Greater than the phase current
b) Equal to the phase current
c) Lesser than the phase current
d) None of these

Q.9 A 68 Ω resistor is connected across the terminal of a 3 V battery. The power dissipation of the resistor is
a) 132 mW b) 13.2mW
c) 22.6 mW d) 226 mW

Q.10 How much continuous current can be drawn from a 60 Ah battery for 14 h?
a) 42.8 A b) 428 A
c) 4.28 A d) 4.2 A

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 Which is the instrument used for measuring Voltage?
Q.12 What is Advantage of AC use?
Q.13 What is power factor?

Q.14 When earthing is done?
Q.15 What are the characteristic of stepper motors?
Q.16 What is the use of ELCB?
Q.17 What type of motors are used to drive pumps?
Q.18 What is a proof motor?
Q.19 What do you mean by light fan circuit?
Q.20 What is the use of isolation transformer?

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Where are maintenance free batteries used?
Q.22 What is the difference between a neural and earth wire?
Q.23 What are the applications of stepper motors?
Q.24 What are the various parameters of AC power?
Q.25 How voltage is measured?
Q.26 What is EMF and how it is different from Voltage?
Q.27 Derive the EMF equation of a transformer.
Q.28 What are the various applications of electric power?
Q.29 Write the relation between the line and phase value of voltage and current in a balanced star connected load?
Q.30 What are various types of fuses?
Q.31 A 400 V is applied to three star connected identical impedances each consisting of a 30Ω resistance in series with 3Ω inductance reactance. Fine line current.
Q.32 What is maintenance free battery?
Q.33 What are the various types of earthing?
Q.34 What is servo motor?
Q.35 Write in brief about Semi-Conductors?