Q.30 What are edgy current losses?

Q.31 How does dynamically induced emf work?

Q.32 Explain the phasor representation of alternating voltage and current.

Q.33 What are the advantages of three phase system over single-phase system?

Q.34 How do thermo couples work? What is the material used for it?

Q.35 How is energy stored in a capacitor?

SECTION-D

Note : Long Answer type question. Attempt any two questions. (2x10=20)

Q.36 A resistor, an ideal capacitor and an ideal inductor are connected in parallel to a source of alternating voltage of 160V at a frequency of 250 Hz. A current of 2A flows through the resistor and a current of 0.8A flows through the inductor. The total current through the circuit is 2.5 A. Assess the resistance of the resistor, the capacity of the ideal capacitor and the inductance of the ideal inductor (presume that IC > IL). Note : The assigned values of voltage and currents are the effective values.

Q.37 Derive the solution of simple Parallel A-C Circuit by Phasor Diagram method.

Q.38 Derive the force on a current carrying conductor played in a magnetic field.

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Roll No.....

4th Sem / Elements of Electrical & Electronics Engineering-II

Subject : Aircraft Maintenance

Time : 3 Hrs. **M.M. : 100**

SECTION-A

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

Q.1 If either the inductance or the rate of change of current is doubled, the induced e.m.f.?

a) Remains constant b) Becomes zero

c) Doubles d) Becomes half

Q.2 For a coil having a magnetic circuit of constant reluctance, if the flux increases, what happens to the current?

a) Increases b) Decreases

c) Remains constant d) Becomes zero

Q.3 Do magnetic flux lines intersect?

a) Yes

b) No

c) Depends on the situation

d) Cannot be determined

Q.4 What is the current found by finding the current in an equidistant region and dividing by N?

a) RMS current b) Average current

c) Instantaneous current d) Total current

Q.5 Average value of current over a half cycle is?

a) 0.671m b) 0.331m

c) 6.71m d) 3.31m

Q.6 Capacitor preferred when there is high frequency in the circuits is _____

a) Electrolyte capacitor b) Mica capacitor
c) Air capacitor d) Glass capacitor

Q.7 A power factor of a circuit can be improved by placing which, among the following in a circuit?

a) Inductor b) Capacitor
c) Resistor d) Switch

Q.8 Magnetic field is strong when_____

a) magnetic field lines are closer
b) magnetic field lines are farther
c) magnetic field lines are longer
d) magnetic field lines are thicker

Q.9 More the number of magnetic flux lines _____ is the force of the magnet.

a) Greater
b) Lesser
c) Either greater or lesser
d) Neither greater nor lesser

Q.10 If the current changes from 5A to 3A in 2 seconds and the inductance is 10H, calculate the emf.

a) 5V b) 10V
c) 15V d) 20V

SECTION-B

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

Q.11 Calculate the capacitance of a capacitor that stores 40 micro C of Charge and has a voltage of 2 V

Q.12 What is Permeability?

Q.13 When will a capacitor be fully charged?

Q.14 What do you mean by emf?

Q.15 What do you mean by mutual inductance?

Q.16 How does R-C circuit work?

Q.17 What is polyphase system?

Q.18 What is Magnetic Flux?

Q.19 Explain Superposition theorem.

Q.20 What is resistivity?

SECTION-C

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

Q.21 What are the uses of Kirchoff's Law.

Q.22 What is the relationship between electrical and thermal unit of work?

Q.23 Explain the analogy between electric and magnetic circuits.

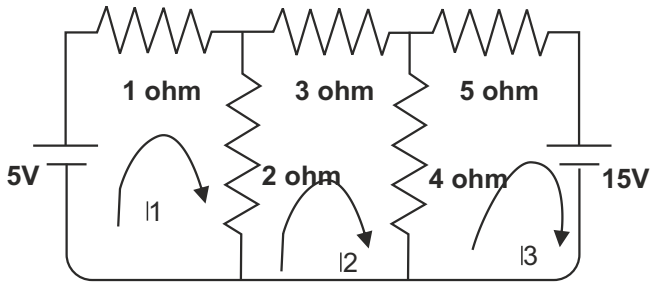
Q.24 Explain B-H curve.

Q.25 How is energy stored in magnetic circuit? Explain with diagram.

Q.26 Write short notes on material used for different electronic components.

Q.27 Explain Faraday's law of electromagnetic induction.

Q.28 Find the value of 11, 12 and 13.



Q.29 Explain Advantage of Multi phase circuits?