SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Explain colour coding of resistance in detail.

Q.24 Write a short note on maximum power transfer theorem.

Q.25 Explain the energy meter in detail.

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2nd Sem / Instrumentation & Control Engg.

Subject : Fundamentals of Electrical Engg.

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 The flow of electric current in a conductor is due to flow of:

a) Electrons b) protons

c) electrons & ions d) charged particles

Q.2 Farad is the unit of:

a) Current b) Voltage

c) capacitance d) none of these

Q.3 Which of the following quantities are the same in all parts of a series circuit?

a) Voltage b) Power

c) current d) both a & c

Q.4 The standard of power supply frequency in our country is:

a) 25 Hz b) 50 Hz

c) 60 Hz d) 100 Hz

Q.5 The superposition theorem is essentially based on the concept of:

a) reciprocity b) linearity

c) duality d) non-linearity

Q.6 A lead acid cell should never be discharged below:

a) 2.0 volt b) 1.6 volt

c) 1.0 volt d) 1.8 volt

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Current is measured in_____.

Q.8 Conductance is the reciprocal of_____.

Q.9 An ideal voltage source does not exist (True/False)

Q.10 Batteries are the practical source of_____.

Q.11 Self induced e.m.f in a coil is_____.

Q.12 Power factor of a circuit_____ be more than unity.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Explain thermocouple.

Q.14 Define potential and potential difference.

Q.15 Why the electrical appliance are connected in parallel.

Q.16 Define peak factor. What is its value for a sine wave?

Q.17 What factors are responsible for the induced emf.

Q.18 What are the disadvantages of low power factor?

Q.19 Define eddy currents and mutual indiction.

Q.20 State Faraday's laws of electromagnetic induction.

Q.21 Explain solar cell.

Q.22 What is the specific gravity? How can we measure it?