DAE 1st YEAR ELECTRONICS TECHNOLOGY

ELTR 114 Electrical circuits

(Paper A)

Model Paper-2

Objective

Time:30 Min **Marks:15**

Q. Encircle the correct answer.

1.An_----- is the smallest particle of an element
(a) atom (b)element (c)substance (d)matter

2. The unit of current is
(a) ohm (b)ampere (c)volt (d)Moh

3. The ability to conduct is
(a)electricity (b)conductivity (c)resistivity (d)all of above

4. The -----law states that potential difference is directly proportional to current
(a)Coulomb's law (b)ohms (c)Kirchhoff's voltage (d)lenz's law

5. Increased number of lines means------ magnetic field
(a)wider (b)stronger (c)greater (d)bigger

6. The magnet made from iron steel is called ------magnet
(a)temporary (b)permanent (c)electro (d)diamagnetic

7. The study of the behavior of charges when they are at rest is called
(a)electricity (b)magnetism (c)electrostatic (d)thermal

8. The relation C=
(a)Q/t. (b)Q/V. (c)Q/L. (d)Q/A

9. The polarity of an AC waveform reversesevery ------cycle
(a)one (b)half (c)three (d)four

10. During each cycle a signe wave reaches its peak value
(a)one time (b)two-time (c)three time (d)four times

11. With the increase in distance between capacitor plates capacitance is
(a)decreased (b)increased (c)constant (d)variable

12. The magnetic lines of forces becomes------where the field is strong
(a)thinner (b)thicker (c)parallel (d)smooth

13. The resistance of a conductor depends on the
(a)friction (b)collision (c)material (d)temperature

14. The material that does not conduct current is called
(a)conductor (b)insulator (c)semiconductor (d)composite

15. The electron in incomplete outermost orbit is called ----electron
(a)heavy (b)lighter (c)valence (d)unique

DAE 1st YEAR COMPUTER INFORMATION TECHNOLOGY

CIT:134 Electronics-1(Paper A)

Model Paper-2
Subjective

Time: 2:30 Min **Marks:60**

Section. I

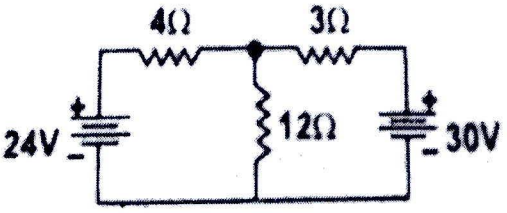
Q.1 Write short answer to any 18 of the following questions **18 X 2 =36**

1.Describe structure of an atom.
2.Describe valence electron .
3.Describe conduction band.
4.Define potential and its unit.
5.Define current with units.
6.Describe laws of resistance.
7. Define resistor and resistivity.
8.Describe resistance in parallel.
9.Define power and its unit.
10.Define Kirchhoff's laws.
11.Describe series combination of cells.
12.In list two materials used in solar cell.
13.Define secondary cell.
14.Compare primary and secondary cell.
15 What is rheostat?
16.In list primary cells type.
17.Describe magnet and magnetism.
18.Describe flux density.
19.Describe permeability.
20.Describe importance of dielectric and dielectric strength.
21.Define capacitor and capacitance.
22.Describe paper capacitor construction.
23. Define forbidden energy gap.
24. Define inductor
25. Describe a wavelength of sine wave
26.State Thevenin's theorem.
27. Define V_{th}.

Section. II

Attempt any three (3) questions **3 X 8 = 24**

Q.2 Describe capacitors combination in series and in list applications of capacitors
Q.3 Write short notes on
(i) Mercury cell
(ii) Types of magnetic material
Q.4Find the current and voltages across all the elements shown in the figure using Kirchhoff's current law.



Q.5 DescribeFaraday's laws of electromagnetic induction in detail.
Q.6. Calculate inductive reactance for series and parallel inductors.

DAE 1st YEAR ELECTRONICS TECHNOLOGY

ELTR 114 Electrical circuits (Paper A)

Model Paper-1

Objective

Time:30 Min **Marks:15**

Q. Encircle the correct answer.

1.The central part of atom is
(a)Electron (b)proton (c)neutron (d)nucleus

2.The unit of potential is
(a)current (b)ampere (c)volt (d)ohm

3.A conductor is a material that conducts electrical current
(a)Easily (b)swiftly (c)sharply (d)fastly

4.The opposition offered to free electrons is called----
(a)Conductance (b)current (c)torque (d)resistance

5.According to ohm's lawthe resistance is directly proportional to the----- of conductor
(a)Width (b) breath (c)thickness (d)length

6.Magnetic field is always mapped out in the form of magnetic
(a)strength (b)lines of force (c)area (d)width

7.Magnetic lines of force always travel from
(a)Horizontal. (b)Vertical (c) north to south (d)South to north

8.When electricity is passed through a solenoid it becomes
(a)conductor (b)magnet (c) inductor (d)insulator

9.The study of behavior of the charges when they are at rest is called
(a) electricity (b)magnetism (c)electrostatic (d) thermal

10. A simple parallel plate capacitor consists of plates
(a)Two. (b) Three. (c)Four. (d)Six

11. Electrolytic capacitors are also called------ capacitors
(a)metal (b)ceramic (c)composite (d)polarized

12.Capacitor uses a material as separator
(a)inductor (b)capacitance (c)dielectric (d)charge

13. The polarity of an AC waveform reverses every cycle
(a)One (b) half (c)three (d)four

14.A pure inductor or capacitors dissipates -----power
(a)Low (b) high (c) no (d) moderate

15.The unit of current is
(a) Ohm (b) ampere (c) Volt (d) Coulomb

DAE 1st YEAR ELECTRONICS TECHNOLOGY

ELTR 114 Electrical circuits(Paper A)

Model Paper-1
Subjective

Time: 2:30 Min **Marks:60**

Section. I

Q.1 Write short answer to any eighteen (18) of the following questions **18 X 2 =36**

1. Describe structure of an atom.
2. Define energy shells.
3. Describe valence electrons.
4. Define current with its unit.
5. Define ohm's law.
6. Define conductor.
7. Explain temperature coefficient of resistance.
8. Describe the resistance in parallel.
9. Define flux.
10. List the types of magnetic material.
11. Define inductor.
12. Define lenz'slaw.
13. Describe Coulomb's law.
14. Describe electric field strength.
15. What is capacitor?
16. Define electric flux.
17. Describe alternating current.
18. Define sine wave.
19. Define cycle.
20. Describe wavelength.
21. Define period.
22. Describe effect of temperature on resistance.
23. Describe energy levels.
24. Describe laws of resistance.
25. Define KVL.
26. State the superposition theorem.
27. State the Norton's theorem.

Section. II

Attempt any three (3) questions **3 X 8 = 24**

Q.2 Explain, wave form, phasor diagram, impedance triangle and time constant of AC through RL seriescircuit

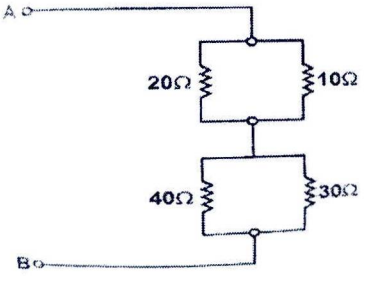
Q.3 Write short notes on the following

(i) Magnetic field around a current caring conductor

(ii) Properties of electric lines of force

Q.4 Compare primary and secondary cell. Explainnickel cadmium cell.

Q.5. Calculate equivalent resistance of the circuit



5.(a)State current division rule

(b)Two resistance 6 ohms and 12 Ohm are connected in parallel across a source having 6 ampere using current division rule find amount of current through each resistor.