

CIT:134 Electronics-1(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 reverse every \_\_\_\_\_ cycle  
(a) one (b) half (c) three (d) four
10. During each cycle a sine 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 become \_\_\_\_\_ 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 1<sup>st</sup> 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. Describe the phase difference
27. Define peak to peak value

**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.4 Find the current and voltages across all the elements shown in the figure using Kirchhoff's current law

Q.5 Describe Faraday's laws of electromagnetic induction in detail.

Q.6. Calculate inductive reactance for series and parallel inductors.

