Course Code:	G1T04	Semester:	1st	TotalMarks	60
Course Name:	Electrical Engineering (BP)			Time:	3hrs.

Answer the following questions.

A. Choose the correct answer. (10X1=10)

i. An ammeter is…………….instrument.
 a) an indicating   c) an integrating
 b) a recording   d) none of the above

ii. Dynamometer type instrument can be used for……
 a) a.c. work only   c) for both a.c. and d.c. work
 b) d.c. work only   d) none of the above

iii. The electric current is due to the flow of
 a) positive charges only
 b) negative charges only
 c) both positive and negative charges
 d) neutral particles only

iv. In a.c. system, we generate sine waveform because…
 a) it can be easily drawn
 b) it produce least disturbance in electrical circuit
 c) it is nature's standard
 d) other waveform cannot be produced easily

v. For the same rating, the size of a 3-phase motor will be …….. 1-phase motor

a) less than that of   c)more than that of

b) same as that of   d)none of the above

vi. The basic function of transformer is to change

    a) the level of voltage   c) the power factor

    b) the power level   d) the frequency

vii. What is the primary principle of a fuse?

    a) open the circuit

    b) protect the appliance

    c) protect the line

    d) prevent excess current from flowing into the line

viii. Which type of system is generally adopted for the generation and transmission of electrical power

    a) 32 phase 4 wire   c) 2 phase 3 wire

    b) 3 phase 3 wire   d) none of the above

ix. A vector quantity has

    a) only magnitude   c) only direction

    b) both (a) and (b)   d) none of the above

x. Accuracy of a measuring instrument indicates the

    a) closeness of the output reading to the true value

    b) ratio of output value to the input value

    c) change in output with each change in input

    d) degree of freedom from random errors

B. I. Answer any four questions.   **(4x3=12)**

1. State KVL and KCL.
2. Write a short note on switch gear and protection.
3. What are the advantages and disadvantages of AC as compare to DC.
4. Define the following terms

Skin Effect; Corona; Ohm's Law

5. A resistance of a material *2m* long and area of cross-section *2 m^2* has a resistance of 1.6 x $10^{-8}\Omega$. Determine its resistivity.
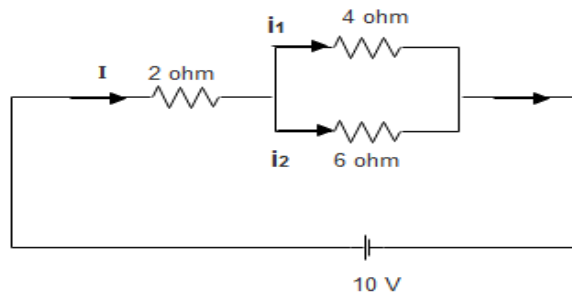
II. Answer any two questions.   **(2x4=8)**

6. Explain the types of losses in DC machine.
7. Explain in brief the types of electrical measuring instrument according to their function.
8. Explain the operation of auto transformer.

C. Answer any five questions.   **(5x6=30)**

9. Explain the construction and working of a transformer.
10. Explain the different types of sub-station in a power system.
11. With a neat sketch explain the working and construction of any one of the following electrical measuring instruments

(a) PMMC (b) Moving iron instrument
12. Discuss in detail generation, transmission and distribution of the power system.
13. Explain any one of the wattmeter methods for power measurement in three phase circuit.
14. Explain three phase Induction motor.
15. Find the voltage drop across each resistor for the given

circuit.

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