



SECTION – D

Answer **any one**, each carries 4 W.

27. Discuss with necessary theory charging of a capacitor and show that as charging continues, charging current decreases.
28. Explain the principle and working of the following :
- Single phase motors
 - Reciprocating pump.
29. Explain the phenomenon of growth and decay of current in an inductance circuit.
(1×4=4)
-



Reg. No. :

Name :

VI Semester B.A./B.Sc./B.Com./B.B.A./B.B.A.T.T.M./B.B.M./B.C.A./B.S.W./
B.A. Afsal-UI-Ulama Degree (CCSS – Reg./Supple./Improv.)

Examination, May 2014

Open Course

6D02 PHY (C) : ELECTRICITY IN LIFE
(2010 Admn. Onwards)

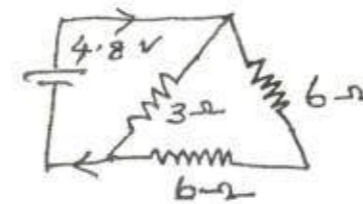
Time: 2 Hours

Max. Weightage : 20

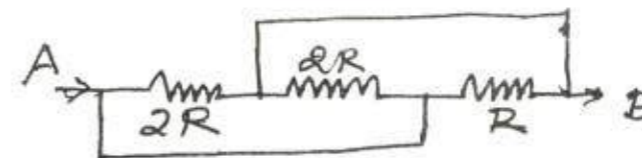
SECTION – A

Answer **all**, each question carries $\frac{1}{4}$ W.

- I. 1. The current in the given circuit is



- 8.31 A
 - 6.82 A
 - 4.92 A
 - 2A
2. The equivalent resistance between the two points A and B is



- $R\Omega$
- $\frac{R}{2}\Omega$
- $2R\Omega$
- $5R\Omega$



3. A magnetic needle is kept in a non uniform magnetic field, if experience
- a) a force and torque b) only a force
c) only a torque d) none of the above
4. Transformers are based in the principle of
- a) Faraday's law b) Newton's law
c) Joule's law d) None
- II. 5. Ammeter is a _____ resistance instrument.
- a) High b) Low
c) Very small d) None of the above
6. Voltmeter is always connected in the circuit in _____ with it.
- a) Series b) Parallel
c) Any way d) None of the above
7. If an energy meter disc makes 10 revolutions in 100 seconds with a load of 450 W. The meter constant is
- a) 1000 b) 500 c) 1600 d) 800
8. The hot wire ammeter is used to measure
- a) a.c. only b) d.c. only c) both a) and b) d) none of these

$$(8 \times \frac{1}{4} = 2)$$

SECTION – B

Answer **any six, each** question carries 1 W.

9. State Ohm's law.
10. What is Joule's law of heating ?
11. What is Horse Power ?
12. Give the principle of a transformer ?



13. What is a rectifier ?
14. What is a shunt ?
15. Give the principle of Moving Coil Galvanometer.
16. What is MCB ?
17. Discuss the first aid for electrical shock.
18. What is UPS ?

(6×1=6)

SECTION – C

Answer **any four, each** carries 2 W.

19. Derive an expression for the effective capacity of number of capacitance connected in Parallel.
20. With a sketch explain the principle and working of Nickle Cadmium battery.
21. If a capacitor of 1 PF and resistance of 82 kΩ are connected in series with an emf of 100 V, calculate the magnitude of energy and the time in which the energy stored in the capacitor will reach half of its equilibrium value.
22. The field winding of a dc electromagnet is wound with 960 turns and has resistance of 50 Ω . When the exciting voltage is 230 V, the magnetic flux linking the coil is 0.005 Wb. Calculate the self-inductance of the coil, and energy stored.
23. Give the principle and operation of eliminator.
24. Distinguish between Pedestrial and Ceiling fan.
25. Discuss the case in handling electrical appliances.
26. Explain how electric ions works ?

(4×2=8)