



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

Coimbatore – 641 035.



Department of Electrical and Electronics Engineering

2 MARKS

1. Recall faradays law of electromagnetic induction.
Whenever a conductor is placed in a varying magnetic field, an electromotive force is induced. If the conductor circuit is closed, a current is induced, which is called induced current.
2. Define Back EMF.
Back EMF is the system in the coil of an electric motor that opposes the current flowing through the coil, when the armature rotates. When the speed varies, the winding characteristics may fluctuate, resulting in variation of back EMF.
3. List the advantages & disadvantages of Conduit wiring.
 - PVC conduits offers a highly resistant against corrosion.
 - It is a durable and very popular system.
 - It is a waterproof wiring system.
 - No risk of electric shock.
 - Alternations are possible.
 - Maintenance is easy.
 - It has a long life.
4. Name few causes of electrical accidents.
 - Unsafe system of work
 - Poor maintenance of cables
 - Uninsulated electrical wiring
 - Inadequate isolation
 - Faulty wiring
 - Naked cords & damaged plugs
5. Show the difference between a fuse and a circuit breaker.

Fuse	Circuit Breaker
Works on the thermal and electrical properties of the conducting materials	Works on the switching principle and electromagnetism
It doesn't give any indication of overloads	It gives an indication of overloads

Fuse can only be used once	A circuit breaker can be used many numbers of times
Provides protection against power overloads	Provides protection against power overloads and short circuits

6. Mention the importance of yoke in a dc machine?

The function of a Yoke in a DC machine is twofold. The yoke acts as path for the magnetic flux. It also provides mechanical support and shape to the dc machine. As it is a path for the magnetic flux, the yoke should be made only of a magnetic material. The Yoke is usually made of cast iron, forged steel or cast steel.

7. List the applications of single induction motor.

Applications of single-phase induction motors

- Pumps.
- Compressors.
- Small fans.
- Mixers.
- Toys.
- High-speed vacuums.
- Electric shavers.
- Drilling machines.

8. Mention the significance of grounding.

Grounding is the process of connecting a conductor or an electrical device to the earth, effectively providing a safe and stable path for excess electricity to escape. This reduces the risk of electrical shock, electrocution, and fires caused by unexpected voltage spikes or short circuits

9. Name few materials and accessories used in wiring circuits

Refer PPT

10. Show the few precautionary measures to avoid accidents

- Never touch anything electrical with wet hands or while standing in water. Wear rubber shoes in wet areas. If you get a tingle or shock when touching a sink, tub, or other wet area, turn off the power at the main panel (if it's safe) and immediately call an electrician.
- Don't use frayed or broken cords or plug in anything with a missing prong.
- Cover unused outlets. Keep metal objects such as silverware away from outlets.

- Don't overload sockets. Use a power board with a safety switch and only use one per wall outlet.
- When unplugging, don't yank! Pull by the plug, not the cord.
- Don't run cords under rugs or furniture. Also keep them away from pets that like to chew.
- Always clean the lint filter for your dryer. If an item says "do not put in dryer", trust the warning!
- Test safety switches each year.
- Don't fly kites near power lines. The kite or string can conduct electricity sending it right through you to the ground.
- Never touch a downed power line or climb a utility pole.

11. Write the emf equation of transformer.

The equation of transformer emf is $E = -d/dt(N\Phi)$,
where N is the number of turns in the primary coil,
 Φ is the magnetic flux, and
E is the emf induced in the secondary coil.

12. List the applications of AC Generators.

AC generators are used in power stations to convert the mechanical energy of steam turbines or water flow (hydroelectricity) into electrical energy.