ELECTRICIAN

Question 1:- what are the Properties of conductors?

Answer: - 1.There is no electric field inside a conductor. Otherwise, the charges in the conductor would move.

2. Charges exist only on the surface of a conductor. Otherwise, there would be electric fields inside.

3. All points of a conductor are at the same potential. Since DV=-EDx, since E=0, the potential must be constant.

Question 2:-what are the principles of electromagnetism?

Answer: - Principles of electromagnetism state that when current passes through a piece of wire magnetic field is generated around the piece of wire and when a piece of wire passes through the magnetic field current is induced into the piece of wire.

Question 3:- what are DC and AC?

Answer: - Electricity flows in two ways; either in alternating current (AC) or in direct current (DC). Electricity or 'current' is nothing more than moving electrons along a conductor, like a wire, that have been harnessed for energy. Therefore, the difference between AC and DC has to do with the direction in which the electrons flow. In DC, the electrons flow steadily in a single direction, or "forward." In AC, electrons keep switching directions, sometimes going "forwards" and then going "backwards."

Question 4:- What is Transformer?

Answer: - Device that converts an alternating (A/C) current of a certain voltage to an alternating current of different voltage, without change of

frequency, by electromagnetic induction. A 'step up' transformer receives a low voltage and converts into a higher voltage, and a 'step down' transformer does just the reverse.

Question 5:- What is Switch gear and how many types of switch gear?

Answer: - In an electric power system, **switchgear** is the combinations of electrical disconnect switches, fuses or circuit breakers used to control, protect and isolate electrical equipment. Switchgear is used both to de-energize equipment to allow work to be done and to clearfaults downstream. This type of equipment is important because it is directly linked to the reliability of the electricity supply.

Here is a brief overview of the most popular gear types:

- **Spur Gear:** characterized by their straight cogs, these gears are mounted on parallel shafts. You'll find examples of spur gear trains in watches and clocks.
- **Bevel Gear:** characterized by cogs cut in a cone shape. The gear shafts are generally mounted at 90º angles to each other.
- **Worm Gear and Wheel:** a gear comprised of a wheel gear with inclined cogs that is rotated by a screw thread (a single-cogged gear called a worm).
- **Helical Gear:** characterized by cogs that is cut at an angle to the face of the gear. Can be mounted perpendicularly or parallel. Automobile transmissions make use of these gears.
- **Internal Gear:** an inside out gear. A small gear is set within a larger gear that has its cogs on the inside. This setup protects the cogs of the gears from contaminants.