

Let us Assess 11-25 questions answers

11. Ans) d

12. Ans) a

13. Ans) Similarities : both have field magnet, armature, brushes.

Dissimilarities : In AC generator there is a slip ring while in DC generator there is a split ring.

14. Ans) b) downwards

15. a. Ans) bulb glows

b. Ans) At the moment of switching ON, the intensity of glow will be low. After that glow increases to a steady value.

Justification : At the moment of switching ON, there will be back emf due to self induction.

c. Ans) The intensity of light will be low due to back emf.

16. a) a) step down transformer

b) 
$$V_p = \frac{V_s \times I_s}{I_p} = \frac{200 \text{ V} \times 1}{0.5}$$

c) When AC is passed through the primary coil of a transformer a voltage is induced in the secondary coil due to the mutual induction.

17. Ans) sound produced  $\rightarrow$  diaphragm vibrates  $\rightarrow$  voice coil vibrates  $\rightarrow$  Electric signals are produced in the voice coil.

18. Ans) To keep power in the primary and secondary, the current in primary will be high in step down transformers. For this thick wires are used in the primary. Otherwise the transformers may burn away.

19. Ans) Short circuit occurs where live wire comes in contact with neutral line or earth line.

20. Ans) Due to insulation fault, if live wire comes in contact with metallic body the user may get electric shock. If the metallic body is earthed, the current flows to earth, thereby protecting the user.

21. Ans) If live wire accidentally touches the metallic part of a device, the user may get shock. To avoid this the metallic part is earthed thereby the voltage is sent to earth.

$$22. \text{Ans) } I = \frac{P}{V} = \frac{1500 \text{ W}}{230 \text{ V}} = \underline{\underline{6.5 \text{ A}}}$$

This current is higher than the amperage of fuse used. So the fuse wire melt away.

23. Ans) Switch, regulator, main fuse, main switch, ELCB, MCB are to be connected in series.

24. Ans) After use, switch off all the electrical equipments. Faulty equipments should be replaced with good one. 5 star equipments should be used.

25. Ans) This is used when device has a metal cover. The cover is connected to earth wire, thereby protecting the user.