STD: X ANSWER KEY

1. low Melting Point

2. Temporary magnet

3. Fleming's left hand rule

4. Low power consumption, High efficiency, High longevity (*Write any two)*

5. $R = r/n = 2/5 = 0.4 \, \Omega$

6. a. Alloy of Tin and Lead

   b. Fuse wire has a relatively low melting point.

7. a. Right hand thumb rule
   b.In circular shape

8. a) Electrical energy converted to heat energy

   b) Heating coil

   c) Nichrome

9. a. $H = I^2Rt = 0.2 \times 0.2 \times 100 \times 2 \times 60 = 480 \, J$

   b. $H = 0.4 \times 0.4 \times 100 \times 2 \times 60 = 1920 \, J$.

10. a) The magnetic needle gets deflected.

    A magnetic field is developed around a current carrying conductor. The magnetic needle is deflected as a result of the mutual action of this magnetic field and that around the magnetic needle.
    b) Right Hand Thumb Rule / Right Hand Screw

11. a. Short circuit and overloading
    b. *The ends of the fuse wire must be connected firmly at appropriate points.
        *The fuse wire should not project out of the carrier base.

12. b. A high potential difference is applied to the gas molecules.
    d. Gas molecules get excited
    a. Excited atoms come back to their original state for attaining stability.
    c. Radiated as light

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