BAL BHARATI PUBLIC SCHOOL,PITAMPURA
Assignment for Class X
ELECTRICITY

1. How do we express electric current?
2. What is an electric circuit?
3. What does a switch do?
4. Conventionally, in an electric circuit the direction of electric current is taken as opposite to the direction of the flow of electrons, which are negative charges. Why?
5. What is the SI unit of electric charge? How many electrons make one coulomb of charge?
6. Define the SI unit of current.
7. Which instrument is used to measure the current flowing in a circuit? How is it connected in the circuit and why?
8. In which smaller units can we measure the small amount of current flowing in the circuit?
9. How are the related to the SI unit of current?
10. What makes the electric charge to flow?
11. State the energy conversion taking place in
    (a) Electric cell (b) Electric torch
12. Define the electric potential difference between two points in an electric circuit carrying some current.
13. Define the SI unit of Electric potential.
14. Which instrument is used to measure the electric potential difference between two points in a circuit? How is it connected in the circuit and why?
15. State the law relating the potential difference across a conductor and the current through it?
16. The *V–I* graph is a straight line that passes through the origin of the graph. What do you conclude from this observation?
17. Define resistance of a material. Define its SI unit.
18. Which component is used to regulate current without changing the voltage source in an electric circuit?
19. Fill in the blanks
    A component of a given size that offers a low resistance is a _____.
    A conductor having some appreciable resistance is called a _____.
    A component of identical size that offers a higher resistance is a _____..
20. An _____ of the same size offers even higher resistance.

21. Discuss the activity to show that resistance of a conductor depends on its length and area of cross section.
22. What is the electrical resistivity of the material of the conductor? What is its SI unit?
23. Which common factor affects both resistance as well as resistivity and how?

24. Alloys are commonly used in electrical heating devices. Why?
25. When a number of resistors are connected in series in a circuit what would be their equivalent resistance and why?
26. When a number of resistors are connected in parallel in a circuit what would be their equivalent resistance and why?
27. It is impracticable to connect an electric bulb and an electric heater in series. Why?
28. What is heating effect of electric current.
    Name the various devices in which this effect is utilized.
29. State the Joule's law of heating. Derive the expression for the same.
30. Which effect of current is responsible for the glow of an electric bulb? Explain.
31. The bulbs are usually filled with few gases. Name those gases. Also discuss the cause for the same.
32. Which metal is used as the filament of an electric bulb and why?
33. How does a fuse work in the electric circuit?
34. Which materials are preferred for a fuse wire and why?
35. Give the ratings of various fuses used in the domestic circuit.
36. Define the commercial unit of energy. Relate it to joules.