ELECTRICITY

Question 1:

A) Fill in the blanks :

1. A voltmeter is connected in _____to the circuit to measure the potential difference between two points.
2. Electric current is the rate of flow of _____
3. Kilowatt hour is the unit of _____
4. In series combination of resistors, potential difference across each resistor is _____ while electric current through each resistor is _____

B) In each of the following question, a statement of Assertion if given by the corresponding statement of Reason. Of the statements mark the correct answer as

a) If both assertion and reason are true and and reason is the correct explanation of assertion.
b) If both assertion and reason are true and and reason is not the correct explanation of assertion.
c) If assertion is true, but reason is false.
d) If assertion is false, but reason is true.

1. Assertion : The 200 W bulbs glow with more brightness than 100 W bulbs.
   Reason : A 100 W bulb has more resistance than 200 W bulb.
2. Assertion : A voltmeter and ammeter can be used to measure both the resistance and power.
   Reason : Power is proportional to voltage and current.

2. Define electric work.
3. Why is tungsten used almost exclusively for filament of electric lamps?
4. State and define the SI unit of potential difference.
5. We use copper and aluminium wire for transmission of electric current. Explain why?
6. Why Nichrome is used to make the elements of electric heater?
7. Prove : 1 kWh = 3.6 MJ.
8. An electric bulb draws 25 W when connected to a 12 V supply. Find the power if it is connected to a 10 V supply.
9. Write short notes on fuse in an electric circuit?
10. Two resistors of 3Ω and 4 Ω are connected in parallel to a cell to draw 0.5 A current from the cell. Calculate the current in each resistor.