

Board – ICSE

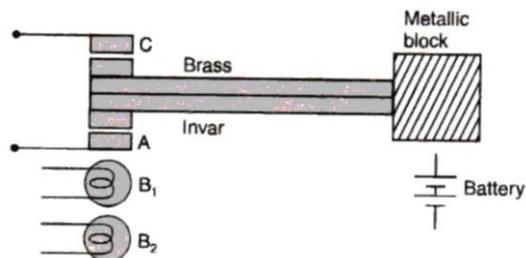
Class –9th

Topic – Current electricity

Max. Marks –30

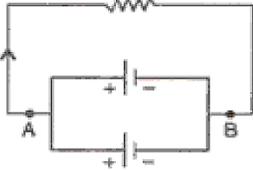
Time – 1.5 Hrs.

- How will you obtain (i) small resistance and (ii) large resistance from a few given resistances?
- Draw a labelled diagram of Leclanche cell. Why is it not suitable for continuous use? [3]
- What is the difference between a voltmeter and a voltmeter? [2]
- You are given conducting wires, a cell, a key, a resistor, two different types of meters labeled 'A' and 'V'. You are required to measure the current in the wire and the potential difference across the resistor. Draw a labeled circuit diagram using appropriate symbols to show how they are connected. Also, mark the direction of current in each component. [3]
- Copy the given diagram of bimetallic strip, battery and two bulbs- B_1 and B_2 . Complete the electric circuit such that B_1 glows when temperature falls 20°C below the room temperature and B_2 glows when temperature rises 50°C above the room temperature. [2]



- Answer the following: [3]
 - Draw a labeled diagram of a simple voltaic cell.
 - Name two major defects in the above cell.
 - What is the e.m.f. of the above cell?
- A primary and a secondary cell are of the same e.m.f. From which one can we draw maximum current? [2]
- Is dry cell really dry? Explain. [3]
- State four factors on which the resistance of a wire depends. [2]
- 'The resistance of a wire is 1 ohm. Does this value depend on the circuit in which it is connected? Explain. [2]
- In the given circuit diagram two cells are connected in parallel. Answer the following: [3]
 - What is the potential difference between points A and B if e.m.f. of each cell is 1.5 V?
 - How does the effective voltage of the two cells connected in series compare to their

arrangement in parallel?



- (iii) Are the cells in a conventional flash light connected in series or in parallel?
12. Which type of cell would you like to use if your device requires
- (i) a current of 70 A for 20 s and
 - (ii) a current of 2 mA occasionally? [2]
13. State three factors on which the resistance of a wire depends. Explain how the resistance depends on the factors stated by you.
14. Is the direction of conventional current and that of electronic current the same? [2]
15. Explain:
- (i) Define potential difference between two charged bodies.
 - (ii) Define one ohm. [1]