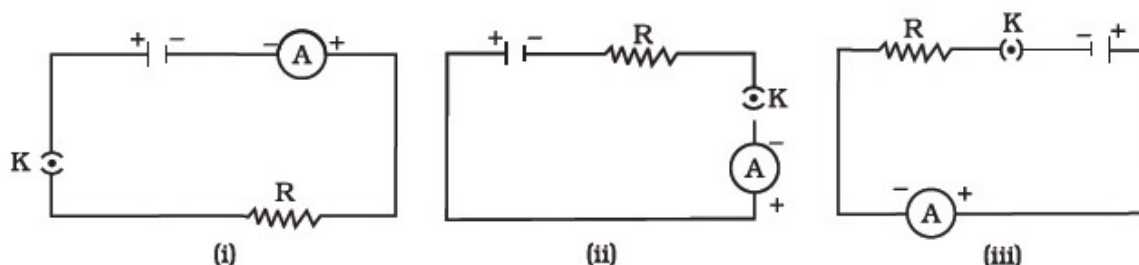
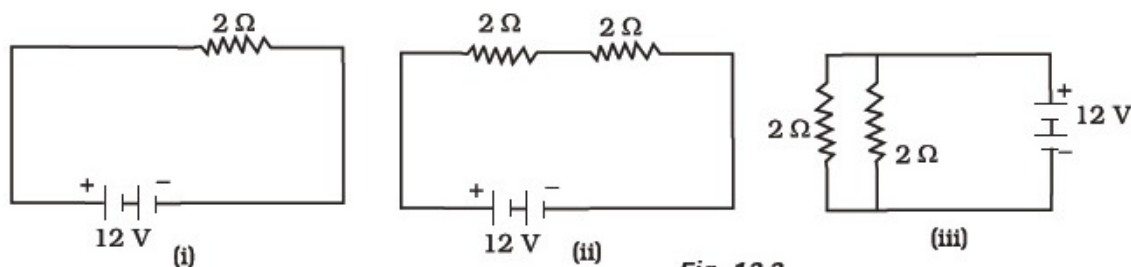


CLASS: X: Physics (Current electricity)**Multiple Choice Questions**

1. A cell, a resistor, a key and ammeter are arranged as shown in the circuit diagrams of Figure 12.1. The current recorded in the ammeter will be

**Fig. 12.1**

- (a) maximum in (i)
 - (b) maximum in (ii)
 - (c) maximum in (iii)
 - (d) the same in all the cases
2. In the following circuits (Figure 12.2), heat produced in the resistor or combination of resistors connected to a 12 V battery will be

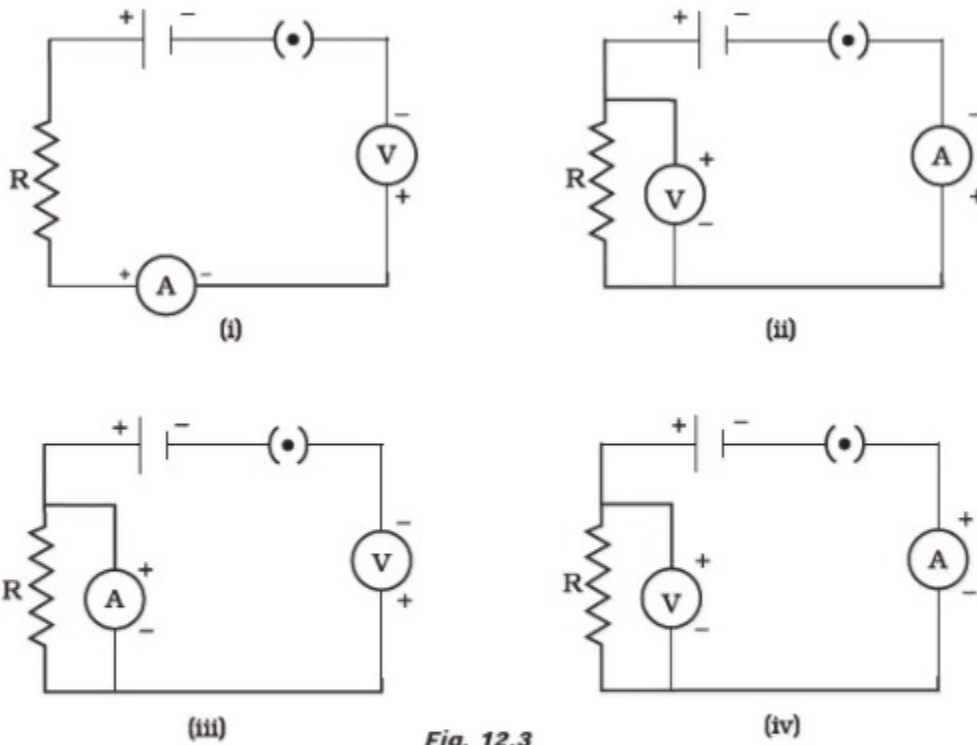
**Fig. 12.2**

- (a) same in all the cases
 - (b) minimum in case (i)
 - (c) maximum in case (ii)
 - (d) maximum in case (iii)
3. Electrical resistivity of a given metallic wire depends upon
- (a) its length
 - (b) its thickness
 - (c) its shape
 - (d) nature of the material

Q4: The unit of electric charge can be written as _____

- (a) volt/joule (V/J) (b) ampere/second (A/s) (c) joule/volt (J/V) (d) tesla (T)

5. Identify the circuit (Figure 12.3) in which the electrical components have been properly connected.



- (a) (i)
- (b) (ii)
- (c) (iii)
- (d) (iv)

Q6: By convention, the charge on a glass rod that has been rubbed with silk is called

- (a) Positive
(b) Negative
(c) either positive or negative
(d) none of these

Q7: Two charged bodies having equal potential are connected through a conducting wire, in this case

- (a) current will flow
(b) current will not flow
(c) cannot say

(d) current will flow if a resistor is also connected.

Q8: What is the maximum resistance which can be made using five resistors each of $1/5 \Omega$?

- (a) $1/5 \Omega$
- (b) 10Ω
- (c) 5Ω
- (d) 1Ω

Q9: What is the minimum resistance which can be made using five resistors each of $1/5 \Omega$?

- (a) $1/5 \Omega$
- (b) $1/25 \Omega$
- (c) $1/10 \Omega$
- (d) 25Ω

Q10: A cylindrical conductor of length l and cross sectional area of A has resistance R . Another conductor of length $2l$ and resistance R of the same material has area of cross section -

- (a) $A/2$
- (b) $3A/2$
- (c) $2A$
- (d) $3A$

Q11: Which of the following represent voltage?

- (a) $\frac{\text{work done}}{\text{electrical charge}}$
- (b) $\text{work done} \times \text{electrical charge}$
- (c) $\frac{\text{work done} \times \text{time}}{\text{electrical charge}}$
- (d) $\frac{\text{work done}}{\text{electrical charge} \times \text{time}}$

Q12: The resistivity does not change if -

- (a) the material is changed
- (b) the temperature is changed
- (c) the shape of the resistor is changed
- (d) both material and temperature are changed

Q13: A student carries out an experiment and plots the V-I graph of three samples of nichrome wire with resistances R_1 , R_2 , and R_3 respectively (Figure) Which of the following is true?

- (a) $R_1 = R_2 = R_3$
- (b) $R_1 > R_2 > R_3$
- (c) $R_1 < R_2 < R_3$
- (d) $R_2 > R_1 > R_3$

Q14: A current of 1 A is drawn from a filament of an electric bulb, Number of electrons passing through a cross section of the filament in 16 seconds would be roughly

- (a) 10^{20}
- (b) 10^{16}
- (c) 10^{18}
- (d) 10^{23}

Q15: The resistivity of an alloy of the order of 10^x would be roughly

- (a) $10^{-6} \Omega \text{ m}$
- (b) $10^{-8} \Omega \text{ m}$
- (c) $10^{12} \Omega \text{ m}$
- (d) $10^{-4} \Omega \text{ m}$

ANSWERS

Question 01 – (d)

Question 02 – (d)

Question 03 – (d)

Question 04 – (c)

Question 05 – (b)

Question 06 – (a)

Question 07 – (b)

Question 08 – (d)

Question 09 – (a)

Question 10 – (c)

Question 11 – (a)

Question 12 – (c)

Question 13 – (c)

Question 14 – (c)

Question 15 – (a)