

# EXERCISE

14.1 Choose the correct answer form the following choices:

- (i) An electric current in conductors is due to the flow of  
 (a) positive ions      (b) negative ions      (c) positive charges       (d) free electrons
- (ii) What is the voltage across a  $6\ \Omega$  resistor when  $3\text{A}$  of current passes through it?  
 (a)  $2\text{V}$       (b)  $9\text{V}$        (c)  $18\text{V}$       (d)  $36\text{V}$
- (iii) What happens to the intensity or the brightness of the lamps connected in series as more and more lamps are added?  
 (a) increases       (b) decreases      (c) remains the same      (d) cannot be predicted
- (iv) Why should household appliances be connected in parallel with the voltage source?  
 (a) to increase the resistance of the circuit  
 (b) to decrease the resistance of the circuit  
 (c) to provide each appliance the same voltage as the power source  
 (d) to provide each appliance the same current as the power source
- (v) Electric potential and e.m.f  
 (a) are the same terms      (b) are the different terms  
 (c) have different units      (d) both (b) and (c)
- (vi) When we double the voltage in a simple electric circuit, we double the  
 (a) current      (b) power      (c) resistance       (d) both (a) and (b)
- (vii) If we double both the current and the voltage in a circuit while keeping its resistance constant, the power  
 (a) remains unchanged      (b) halves  
 (c) doubles      (d) changes/replaces
- (viii) What is the power rating of a lamp connected to a  $12\text{V}$  source when it carries a current of  $2.5\text{A}$ ?  
 (a)  $4.8\text{ W}$       (b)  $14.5\text{ W}$        (c)  $30\text{ W}$       (d)  $60\text{ W}$
- (ix) The combined resistance of two identical resistors, connected in series is  $8\ \Omega$ . Their combined resistance in a parallel arrangement will be  
 (a)  $2\ \Omega$       (b)  $4\ \Omega$       (c)  $8\ \Omega$       (d)  $12\ \Omega$

Q	Ans	Q	Ans	Q	Ans	Q	Ans
1.	d	2.	c	3.	b	4.	c
5.	a	6.	d	7.	c	8.	c
9.	a						