






- I. Four alternatives are given for each of the following questions / incomplete statements. Choose the correct alternative and write the complete answer along with its letter of alphabet.   $8 \times 1 = 8$




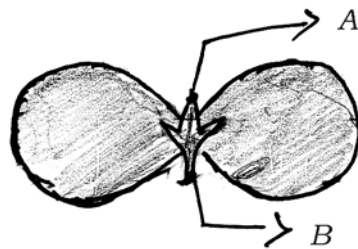
1. The inner surface of solar cooker is coated with black paint to 



- (A) absorb more heat  (B) reflect light   
 (C) prevent rusting  (D) converge the light rays.

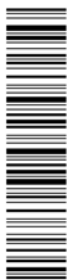
2. As the pH value of a neutral solution increases 









- (A) basic property decreases and number of  $\text{OH}^-$  ions increases  
 (B) acidic property increases and number of  $\text{H}^+$  ions decreases   
 (C) basic property increases and number of  $\text{OH}^-$  ions increases  
 (D) acidic property decreases and number of  $\text{H}^+$  ions increases. 

3. In the given figure of Cotyledon the parts labelled as A and B respectively are 



- (A) fruit, shoot   
 (B) primary shoot, primary root   
 (C) secondary root, primary shoot  
 (D) bud, leaf.



4. An object is kept at the centre of curvature of a concave mirror. The position and nature of the image formed is 
- (A) between  $F$  and  $C$  and inverted
- (B) behind the mirror and erect 
- (C) between  $F$  and  $P$  and erect
- (D) at the centre of curvature and inverted. 
5. The power plant in which natural source of energy is directly used to rotate turbines is 
- (A) thermal power plant
- (B) hydro-electric power plant 
- (C) nuclear power plant
- (D) solar power plant. 
6. An example for saturated hydrocarbon is
- (A)  $C_2H_6$  
- (B)  $C_3H_4$
- (C)  $C_2H_2$
- (D)  $C_2H_4$ . 

12. Sodium and potassium are placed in the same group of modern periodic table. If the molecular formula of sodium sulphate is  $\text{Na}_2\text{SO}_4$ , then decide the molecular formula of potassium sulphate. Give reason for your answer.

13. "Biogas plant is a boon to farmers." Why ?

14. The gene for brown coloured hair is recessive over gene for black coloured hair. What is the hair colour of a person who has inherited a gene for brown coloured hair from mother and black coloured hair from father ?

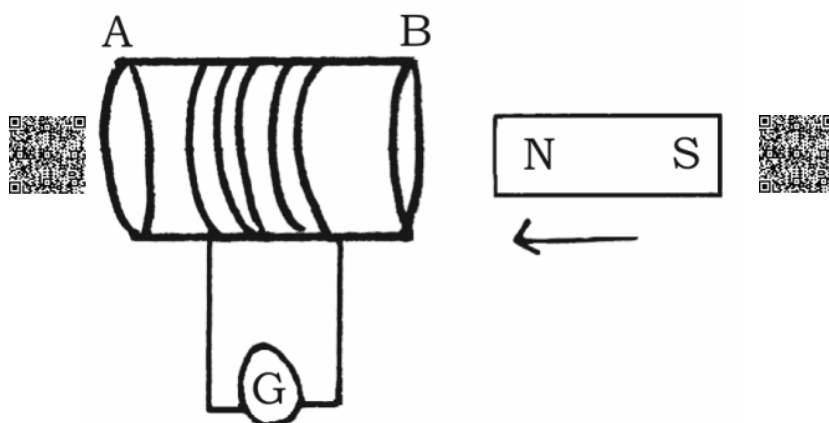
15.  $\text{CuO} + \text{H}_2 \rightarrow \text{Cu} + \text{H}_2\text{O}$

In this reaction name the reactant


i) that is oxidised


ii) that is reduced.

16. Observe the given figure.




What type of current is induced in the coil by doing the experiment related to this figure ? Give reason for your answer.



Four alternatives are given for each of the following questions / incomplete statements. Choose the correct alternative and write the complete answer along with its letter of alphabet.   $10 \times 1 = 10$


1. During the evaporation of cleaned sugarcane juice, the reason to reduce the pressure surrounding it is, to 



- (A) increase the boiling point of sugarcane juice
- (B) decolourise the sugar 
- (C) decrease the boiling point of sugarcane juice
- (D) increase the size of the sugar crystals.

2. The function of parathormone is to regulate

- (A) glucose level in the blood 
- (B) calcium salts in blood and bones
- (C) heartbeat, breathing rate 
- (D) growth and development of the body.

3. A ship sends ultrasonic sound. This sound returns from the seabed and is detected after 6s. If the speed of ultrasonic sound through seawater is  $1.5 \text{ kms}^{-1}$ , the depth of the sea is 

- (A) 5 km 
- (B) 5.5 km 
- (C) 3.5 km
- (D) 4.5 km.

4. Sodium chloride in its aqueous solution is a strong electrolyte, because it



(A) dissociates completely

(B) is a covalent compound



(C) does not dissociate

(D) dissociates incompletely.

5. A device used to convert alternating current into direct current is



(A) transistor



(B) diode

(C) dynamo

(D) motor.



6. With reference to the working of a rocket, in the equation  $RV_{ex} = Ma$ ,  $R$  stands

for



(A) resistance


(B) acceleration





(C) rate of fuel consumption


(D) mass.





7. The technology of developing genetically similar molecules, cells, tissues or organisms from a common precursor in laboratory condition is 





- (A) cloning 
- (B) DNA fingerprint technology
- (C) genetic engineering 
- (D) Recombinant DNA technology.




8. Biofuel is ecofriendly because, it 

- (A) increases the temperature of the atmosphere
- (B) produces less amount of carbon dioxide when burnt
- (C) is a fossil fuel 
- (D) is a conventional source of energy.

9. The hydrocarbon that undergoes hydrogenation among the following is 

- (A)  $\text{CH}_4$  
- (B)  $\text{C}_2\text{H}_6$
- (C)  $\text{C}_2\text{H}_2$
- (D)  $\text{C}_3\text{H}_8$  

10. If phloem of a plant is removed, then the most affected process is 

-  (A) food conduction 
- (B) water conduction
- (C) removal of wastes
- (D) mineral conduction. 

11. Match the names of organic compounds given in **Column-A** with their molecular formula given in **Column-B** and write the answer along with its letters :  $4 \times 1 = 4$



**Column-A**

(A) Propane

(B) Butene 


(C) Cyclohexane

(D) Propyne

**Column-B**(i)  $C_4H_8$  (ii)  $C_4H_{10}$ (iii)  $C_6H_6$ (iv)  $C_3H_8$ (v)  $C_6H_{12}$  (vi)  $C_4H_6$ (vii)  $C_3H_4$ .

Answer the following questions :

$7 \times 1 = 7$

12. What is a solar cell ? 

13. What is catenation ?



14. Ligaments help in the movement of bones. Why ?

15. Draw the symbolic representation of a transformer.

16. What is nuclear fission reaction ?



17. Name the greenhouse gases in the atmosphere.

18. Mention the important features of a star which is in white dwarf stage.

