CHEMISTRY

BOOKS - EDUCART PUBLICATION

SAMPLE PAPER 10

Section A

1. Identify the correct state of reactants and products from the following equations :

A.

$$Zn_{(s)} + CuSO_{4(s)} \rightarrow ZnSO_{4(aq)} + Cu_{(s)}$$

B.

$$Zn_{(aq)} + CuSO_{4(aq)} \rightarrow ZnSO_{4(s)} + Cu_{(s)}$$

C.

$$Zn_{(aq)} + CuSO_{4(s)} \rightarrow ZnSO_{4(s)} + Cu_{(aq)}$$

D.

$$Zn_{(s)} + CuSO_{4(aq)} \rightarrow ZnSO_{4(aq)} + Cu_{(s)}$$

Answer:

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2. What happens when calcium is treated with water?

(i) It does not react with water.

(ii) It reacts violently with water.

(iii) It reacts less violently with water.

(iv) Bubbles of hydrogen gas formed stick to the surface of calcium.

A. (I) and (IV)

B. (II) and (III)

C. (I) and (II)

D. (III) and (IV)

Answer:

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3. Study the chemical equation and find the values of the coefficients p,q,r,s in order to balance the equation .

$$pPbS + qH_2O_2 \rightarrow rPbSO_4 + sH_2O$$

$pPbS + qH_2O_2 \rightarrow rPbSO_4 + sH_2O$

	p	q	r	s
(a)	1	2	1	2
(b)	1	4	1	4
(c)	2	1	2	1
(d)	4	2	4	4

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4. Which of the following are exothermic reactions ?

I. Burning of coal

II . Respiration

III Decomposition of vegetable matter into compost .

IV Decomposition of silver chloride into silver .

A. Both (I) and (II)

B. Both (II) and (III)

C. (I),(II) and (III)

D. (I),(III) and (IV)

Answer:

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5. Which acid is present in honey bee string ?

A. Sulphuric acid

B. Hydochloric acid

C. Nitric Acid

D. formic acid

Answer:

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6. How many molecules of water of crystallisation are there in :

(I) plaster of Paris

(II) washing soda crystals

A. $\frac{1}{2}, 10$

B. $10, \frac{1}{2}$

C. $9, 1$

D. $2, 9$

Answer:

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7. There are many chemical processes around us such as respiration and photosynthesis which can be termed as redox reactions .

Match the column I with the correct definitions given in column II in any oxidation reduction

reaction :

Column I	Column II
(I) Oxidation	(A) Addition of H or removal of O from a substance
(II) Reduction	(B) The substance which provides H for reduction or which removes O
(III) Oxidizing agent	(C) Addition of O or removal of H from a substance
(IV) Reducing agent	(D) The substance which provides O for oxidation or which removes H

A. (I) - (A) , (II) - (C) , (III) - (D) , (IV) - (B)

B. (I)-(C) , (II) - (A) , (III) - (B) , (IV) - (D)

C. (II) -(C) , (II) - (A) , (III) - (D) , (IV) -(B)

D. (I) -(C) , (II) - (A) , (III) - (D) , (IV) - (B)

Answer:

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Section B

1. The pH values of three solutions P,Q and R respectively having equal molar concentrations are $5.0, 2.8 \text{ and } 3.5$ respectively at 298 K . Which represents the correct order of their acid strength ?

A. $P < R < Q$

B. $P < Q < R$

C. $R < Q < P$

D. $Q < R < P$

Answer:

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2. $Fe + CuSO_4 \rightarrow FeSO_4 + Cu$

$Zn + FeSO_4 \rightarrow ZnSO_4 + Fe$

$2Al + 3ZnSO_4 \rightarrow Al_2(SO_4)_3 + 3Zn$

Arrange Fe, Zn,Al and Cu in decreasing order of reactivity on the basis of above reaction.

A. Al, Zn, Fe, Cu

B. Zn, Cu, Fe, Al

C. Fe, Cu, Zn, Al

D. Al, Zn, Cu, Fe

Answer:

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3. Which of the following can be used as olfactory indicators ?

(I) Vanilla (II) Soap (III) Onion (IV) Litmus

A. Both (I) and (II)

B. Both (I) and (III)

C. Both (II) and (III)

D. Both (I) and (IV)

Answer:

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4. Baking powder is a mixture of :

A. Sodium carbonate and acetic acid

B. Sodium carbonate and tartaric acid

C. Sodium hydorgen carbonate and tartaric acid

D. Sodium hydrogen carbonate and acetic acid

Answer:

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5. Assertion (A) : $MgCl_2$ is an ionic compound .

Reason (R) : Metals and not -metals react by mutual complete transfer of electrons .

A. Both A and R are true , and R is the correct explanation of A.

B. Both A and R are true , but R is not the correct explanation of A .

C. A is true but R is false .

D. A is false R is true .

Answer:

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6. Assertion (A) : Magnesium ribbon is cleaned with water before burning .

Reason (R) : MgO layer is formed on magnesium ribbon , on exposure to atmosphere .

A. Both A and R are true , and R is the correct explanation of A.

B. Both A and R are true , but R is not the correct explanation of A .

C. A is true but R is false .

D. A is false R is true .

Answer:

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7. Assertion (A) : Left ventricle of heart has a thinner wall than that of the right ventricle .

Reason (R) : Right ventricle pump blood to nearby lungs .

A. Both A and R are true , and R is the correct explanation of A.

B. Both A and R are true , but R is not the correct explanation of A .

C. A is true but R is false .

D. A is false R is true .

Answer:

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8. Electrovalent compounds are usually solid and hard in nature . This is due to :

A. strong forces of attraction between the oppositely charged ions

B. weak forces of attraction between the oppositely charged ions

C. strong forces of attraction between the same charged ions

D. weak forces of attraction between the similarly charged ions

Answer:

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9. An essential element used in the synthesis of proteins and other compounds is :

A. Phosphorus

B. Nitrogen

C. Iron

D. Magnesium

Answer:

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10. Tyndall effect is the phenomenon of :

A. Reflection of light

B. Refraction of light

C. Scattering of light

D. Dispersion of light

Answer:

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11. Ionic compounds are solids and hard because :

A. of the strong force of attraction between the positive and negative ions

B. they are formed between metals and non - metals

C. due to sharing of electrons

D. due to formation of strong hydorgen bonds between the compounds

Answer:

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