CHEMISTRY

BOOKS - X BOARDS

QUESTION PAPER 2022 TERM 1 SET 2

Section A

1. A student while burning a magnesium ribbon in air, collected the products in a wet watch glass. The new product obtained was:

A. Magnesium oxide

B. Magnesium carbonate

C. Magnesium hydroxide

D. Magnesium chloride

Answer:

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2. Consider the following chemical equation :

$2NaOH + H_2SO_4 \rightarrow Na_2SO_4 + 2H_2O$

The informations conveyed by this equation are:

I. NaOH reacts with H_2SO_4 to produce Na_2SO_4 and water.

II. For every one molecule of H_2SO_4, two molecules of

NaOH are required.

III. Acids and bases are non-ionic in nature.

IV. This is not a redox reaction.

The correct statements are:

A. I and II

B. II and III

C. III and IV

D. I and IV

Answer:

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3. Select the correct matching in the following table in connection with the given chemical reaction :

$CaSO_4 + Fe \rightarrow FeSO_4 + Cu$

	Initial colour of solution	*Final colour of solution*	*Final colour of iron nail*	*Type of reaction*
(a)	Pale green	Blue	Grey	Displacement
(b)	Blue	Pale green	Brownish	Double displacement
(c)	Blue	Light blue	Grey	Double displacement
(d)	Blue	Pale green	Brownish	Displacement

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4. Consider the following processes:

I. Dilution of sulphuric acid

II. Sublimation of dry ice

III. Condensation of water vapours

IV. Dissolution of ammonium chloride in water

The endothermic process(es) is/are:

A. I and III

B. II only

C. III only

D. II and IV

Answer:

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5. A solution gives yellowish orange colour when a few drops of universal indicator are added to it. This solution is of:

A. Lemon juice

B. Sodium chloride

C. Sodium hydroxide

D. Milk of magnesia

Answer:

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6. Concentrated H_2SO_4 , is diluted by adding drop by drop

A. Water to acid with constant stirring

B. Acid to water with constant stirring

C. Water to acid followed by a base

D. Base to acid followed by cold water

Answer:

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7. Absence of tartaric acid in baking powder makes the taste of the cake bitter due to the presence of:

A. Sodium hydrogen carbonate

B. Sodium carbonate

C. Sodium metabisulphite

D. Sodium sulphate

Answer:

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8. The pH of acid rain is approximately :

A. 5.6

B. 6.4

C. 7.0

D. 7.9

Answer:

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9. Salt 'A' commonly used in food products, is a reactant to produce salt 'B', used in the kitchen for making tasty, crispy pakoras. Salt 'B' on heating converts into another salt 'C', which is used in the manufacturing of glass. Salts 'A', 'B' and 'C' respectively are :

A. $NaHCO_3, NaCl, Na_2CO_3$

B. $Na_2CO_3, NaHCO_3, NaCl$

C. $Na_2CO_3, NaCl, NaHCO_3$

D. $NaCl, NaHCO_3, Na_2CO_3$

Answer:

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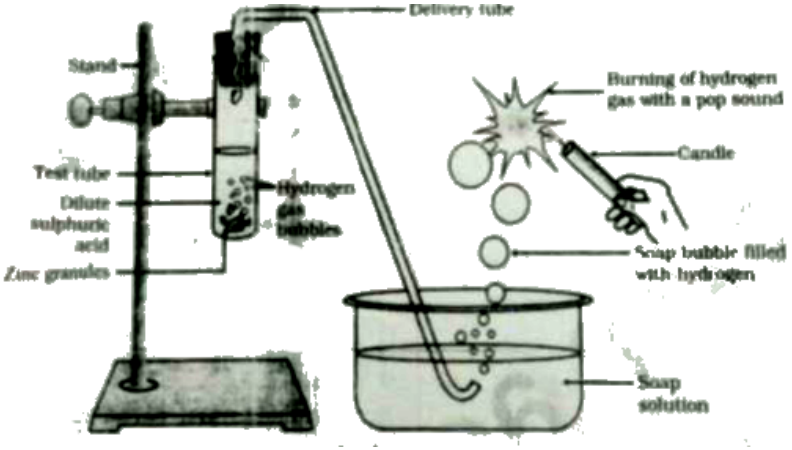
10. In the following diagram, what would happen if some amount of sodium hydroxide is taken in place of sulphuric acid and the test tube is heated :



A. Same amount of H_2 gas is evolved

B. H_2 gas is not evolved

C. The amount of H_2 gas evolved is much less

D. In place of H_2 gas, O_2 gas evolves

Answer:

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Section B

1. When lead nitrate powder is heated in a boiling tube, we observe:

A. Brown fumes of nitrogen dioxide

B. Brown fumes of lead oxide

C. Yellow fumes of nitrogen dioxide

D. Brown fumes of nitric oxide

Answer:

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2. An aqueous solution of a salt shows an orange red colour when a drop of universal indicator is added to it. This salt is made up of:

A. A strong acid and a strong base

B. A weak acid and a weak base

C. A strong acid and a weak base

D. A weak acid and a strong base

Answer:

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3. Three test tubes A, B and C contain distilled water, an acidic solution and a basic solution respectively. When red litmus solution is used for testing these solutions, the observed colour changes respectively will be:

A. A- no change, B-becomes dark red, C - becomes blue

B. A-becomes light red, B - becomes blue, C - becomes red

C. A-becomes red, B - no change, C - becomes blue

D. A- becomes light red, B - becomes dark red, C - becomes blue

Answer:

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4. Given below is a reaction showing Chlor-alkali process:

$$2NaCl(aq) + 2H_2O(l) \rightarrow \underset{(A)}{2NaOH(aq)} + \underset{(B)}{Cl_2(g)} + \underset{(C)}{H_2(g)}$$

The products A, B and C are produced respectively :

A. At the anode, at the cathode, near the cathode

B. Near the cathode, at the anode, at the cathode

C. At the cathode, near the cathode, at the anode

D. At the anode, near the cathode, at the cathode

Answer:

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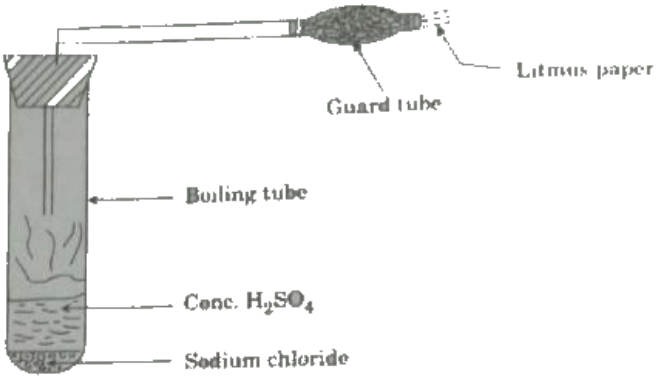
5.



In the activity shown in the diagram, if the climate is humid, the role of calcium chloride taken in the guard tube is to :

A. Absorb the evolved gas

B. Warm up the gas

C. Dry the gas

D. Absorb chloride ions from the evolved gas

Answer:

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6. Which one of the following chemicals is used in soda acid fire extinguishers ?

A. Sodium chloride

B. Sodium acetate

C. Sodium hydrogen carbonate

D. Ammonium sulphate

Answer:

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7. Assertion (A): Silver salts are used in black and white photography,

Reason (R): Silver salts do not decompose in the presence of light.

A. Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion

(A).

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

C. Assertion (A) is true, but Reason (R) is false.

D. Assertion (A) is false, but Reason (R)is true.

Answer:

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8. Assertion (A) : The solutions of ionic compounds are good conductors of electricity.

Reason (R) : Movement of atoms of elements take place in solution.

A. Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).

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

C. Assertion (A) is true, but Reason (R) is false.

D. Assertion (A) is false, but Reason (R)is true.

Answer:

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9. Match the metal (Column I) with its reaction with oxygen (Column II) :

	Column I		Column II
A.	Potassium	(i)	Does not react event at high tempera
B.	Zinc	(ii)	Gets coated with black-coloured laye
C.	Copper	(iii)	Does not burn at ordinary temperatu
D.	Silver	(iv)	Burns vigorously

A. A - (iv), B - (iii), C -(ii), D-(i)

B. A-(iv), B-(ii), C-(i), D-(iii)

C. A-(iii), B-(ii), C-(i), D-(iv)

D. A-(iv), B-(ii), C-(iii), D-(i)

Answer:

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10. Four test tubes A, B, C and D are taken. In test tube A iron nail is dipped in copper sulphate solution. In test tube B copper wire is dipped in ferrous sulphate solution. In test tube C zinc metal is dipped in ferrous sulphate solution and in test tube D iron nail is dipped in zinc sulphate solution. The reactivity order has been found to be $Zn > Fe > Cu$. In which test tubes was the colour change observed ?

A. A and C

B. A and B

C. B and C

D. B and D

Answer:

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Section C

1. One day Kamal saw that her mother was roasting peanuts in it pen (kadahi) in the kitchen and she had taken ordinary salt to roast the peannuts. She was surprised to observe that in spite of very high temperature, the salt does not melt and the peanuts also get roasted.

The chemical name of common salt is:

A. Potassium chloride

B. Sodium Carbonate

C. Sodium hydrogen carbonate

D. Sodium chloride

Answer: 4

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2. One day Kamal saw that her mother was roasting peanuts in it pen (kadahi) in the kitchen and she had taken ordinary salt to roast the peannuts. She was surprised to observe that in spite of very high temperature, the salt does not melt and the peanuts

also get roasted.

Common salt is

A. A covalent compound

B. An ionic compound formed by Sharing electrons

C. An ionic compound formed by the transfer of electrons

D. Soluble in organic solvents

Answer:

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3. One day Kamal saw that her mother was roasting peanuts in it pen (kadahi) in the kitchen and she had taken ordinary salt to roast the peannuts. She was surprised to observe that in spite of very high temperature, the salt does not melt and the peanuts also get roasted.

Common salt is not a raw material for:

A. Bleaching powder

B. Plaster of Paris

C. Baking soda

D. Caustic soda

Answer:

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4. One day Kamal saw that her mother was roasting peanuts in it pen (kadahi) in the kitchen and she had taken ordinary salt to roast the peanuts. She was surprised to observe that in spite of very high temperature, the salt does not melt and the peanuts also get roasted.

Common salt is used as a raw material in the preparation of washing soda in which the number of molecules of water of crystallisation is:

A. 10

B. 7

C. 5

D. 2

Answer:

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