CHEMISTRY

BOOKS - EVERGREEN CHEMISTRY (ENGLISH)

SAMPLE PAPER 04

Questions

1. An element in period 3 whose electron affinity is zero.

A. Neon

B. Sulphur

C. Sodium

D. Argon

Answer: D

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2. what happens when a solution of an acid is mixed with a solution of a base in a test tube ?

(i) The temperature of the solution increases

(ii) The temperature of the solution decreases

(iii) The temperatue of the solution remains the same.

(iv) salt formation takes place.

A. Temperature of the solution decreases.

B. Temperature of the solution increases

C. Temperature of the solution remains the same

D. None of the above

Answer: B

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3. When two compounds R and S have same percentage composition. Then the compounds R and S are :

A. identical

B. isomer

C. either identical or isomer

D. All are correct

Answer: D

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4. Ionic bond is present in which of the following species :

A. O_2

B. $CHCl_3$

C. $NaBr$

D. CCl_4

Answer: C

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5. Which one of the following salt solutions on reaction with excess sodium hydroxide solution gives a clear solution finally ?

A. $Pb(NO_3)_2(aq)$

B. $CuSO_4(aq)$

C. $FeCl_3(aq)$

D. $ZnSO_4(aq)$

Answer: A

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6. Identify the weak electrolyte from the following:

(A) Sodium chloride solution

(B) Dilute hydrochloric acid

(C) Dilute sulphuric acid

(D) Aqueous acetic acid

A. Sodium chloride solution

B. Dilute hydrochloric acid

C. Dilute sulphuric acid

D. Aqueous acetic acid

Answer: D

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7. Arrange the following as per instruction given in the brackets : K, CI, Na, S, Si (increasing order of atomic size)

A. $K < Na < Si < S < Cl$

B. $K < Na < Si < Cl < S$

C. $Na < S < Cl < K < Si$

D. $Si < S < Cl < Na$

Answer: A

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8. The type of bonding in HCI molecule is

A. Polar covalent bond

B. Pure covalent

C. Non-polar

D. Hydrogen bonding

Answer: A

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9. Which of the following salts does not contain water of crystallisation?

A. Blue vitriol

B. Baking soda

C. Washing soda

D. Gypsum

Answer: B

10. The precipitate of which of the following compounds is soluble in excess of ammonia solution?

A. Iron(II) chloride

B. Magnesium chloride

C. Copper(II) sulphate

D. Lead nitrate

Answer: C

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11. What indicates the actual number of constituent atoms in a molecule?

A. Empirical formula

B. Molecular formula

C. Empirical mass

D. Molecular mass

Answer: B

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12. The particles present in strong electrolytes are

A. only molecules

B. mainly ions

C. ions and molecules

D. only atoms

Answer: B

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13. Among the following the one which is composed of all the three kinds of bond (ionic, covalent and coordinate bond) is :

A. Sodium chloride

B. Ammonia

C. Carbon tetrachloride

D. Ammonium chloride

Answer: D

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14. Which one of the following salt solutions on reaction with excess of ammonium hydroxide solution results finally in dissolution of the precipitate first formed ?

A. $AlCl_3(aq)$

B. $FeSO_4(aq)$

C. $Fe(SO_4)_3(aq)$

D. $ZnSO_4(aq)$

Answer: D

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15. Which of these will act as a non-electrolyte?

A. Liquid carbon tetrachloride

B. Acetic acid

C. Sodium hydroxide aqueous solution

D. Potassium chloride aqueous solution

Answer: A

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16. Which of the following is the atomic number of an element that forms basic oxide?

A. 18

B. 17

C. 19

D. 15

Answer: C

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17. Which of the following gives the correct increasing order of acid strength?

A. Water $<$ Acetic acid $<$ Hydrochloric acid

B. Water $<$ Hydrochloric acid $<$ Acetic acid

C. Acetic acid $<$ Water $<$ Hydrochloric acid

D. Hydrochloric acid $<$ Water $<$ Acetic acid

Answer: A

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18. If two compounds have the same empirical formula but different molecular formula, they must have

A. different percentage composition.

B. different molecular mass

C. same viscosity

D. same vapour density

Answer: B

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19. Choose the correct answer from the options A,B,C&D given: The most electronegative element from the following elements is:

A. Magnesium

B. Chlorine

C. Aluminium

D. Sulphur

Answer: C

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20. Choose the correct answer from the options given below :

The molecule containing a triple covalent bond is : ammonia, methane, water, nitrogen

A. Ammonia

B. Methane

C. Water

D. Nitrogen

Answer: D

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21. What is formed when zinc reacts with sodium hydroxide?

A. Zinc hydroxide and sodium

B. Sodium zincate and hydrogen gas

C. Sodium Zinc oxide and hydrogen gas

D. Sodium zincate and water

Answer: B

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22. Choose the correct answer from the options given below :

Hydroxide of this metal is soluble in sodium hydroxide solution.

A. Magnesium

B. Lead

C. Silver

D. Copper

Answer: B

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23. The starting material which takes part in chemical reaction is called :

A. product

B. reactant

C. catalyst

D. starter

Answer: B

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24. During ionisation metals lose electrons, this change can be called :

A. Oxidation

B. Reduction

C. Redox

D. Displacement

Answer: A

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25. Alkaline earth metals include:

A. Group 1 element

B. Group 2 element

C. Group 18 element

D. Group 17 element

Answer: B

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26. Methyl orange is :

A. Pink in acidic medium, yellow in basic medium

B. Yellow in acidic medium, pink in basic medium

C. Colourless in acidic medium, pink in basic medium

D. Pink in acidic medium, colourless in basic medium

Answer: A

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27. The formula which gives the simple ratio of each kind of atoms present in the molecule of a compound is called :

A. Molecular Formula

B. Empirical Formula

C. Structural Formula

D. None of these

Answer: B

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28. Why do atoms share electrons in covalent bonds?

A. To increase their atomic numbers

B. To attain a noble-gas electron configuration

C. To become more polar

D. To become ions and attract each other

Answer: B

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29. The hydroxide which is soluble in excess of NaOH is .....

A. $Zn(OH)_2$

B. $Fe(OH)_2$

C. $Fe(OH)_3$

D. $Al(OH)_3$

Answer: A

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30. The metallic electrode which does not take part in an electrolytic reaction ? (Inert electrode)

A. Cu

B. Ag

C. Pt

D. Ni

Answer: C

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31. Identify the element belonging to third period and 17th group of the periodic table.

A. Chlorine

B. Bromine

C. Sulphur

D. Silicon

Answer: A

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32. Brine is the common name of

A. aqueous solution of sodium hydroxide

B. aqueous solution of sodium carbonate

C. aqueous solution of sodium chloride

D. aqueous solution of sodium bicarbonate

Answer: C

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33. Covalent bond is formed between :

A. Metal and non-metal

B. Metals

C. Two non-metals

D. Non-metal and an ion

Answer: C

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34. Name the reagent from the following which can be used to distinguish zinc nitrate solution from magnesium nitrate.

A. $NH_4OH(aq)$

B. $NaOH(aq)$

C. $BaCl_2$

D. H_2SO_4

Answer: A

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35. The formula which gives the simple ratio of each kind of atoms present in the molecule of a compound is called :

A. Empirical Formula

B. Molecular Formula

C. Structural Formula

D. None of these

Answer: B

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36. Select the correct answer from the list given in brackets :

When dilute sodium chloride is electrolysed

using graphite electrodes, the cation is discharged at the cathode most readily. $[Na^+, OH^-, H^+, Cl^-]$.

A. Na^+

B. OH^-

C. H^+

D. Cl^-

Answer: C

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37. Consider the section of the periodic table given below.

Group numbers	IA	IIA	IIIA	IVA	VA	VI A	VIIA	0
	1	2	13	14	15	16	17	18
	Li		F			O	J	Ne
	A	Mg	E	Si		H	K	
	B	C		F	G			L

Note : In this table B does not represent boron

C does not represent carbon

F does not represent fluorine

H does not represent hydrogen

K does not represent potassium

You must see the position of the element in

the periodic table.

Some elements are given in their own symbol and position in the periodic table, while others are shown with a letter. With reference to the table:

Which is the most electronegative ?

A. A

B. D

C. O

D. J

Answer: D

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38. Consider the section of the periodic table given below.

Group numbers	IA	IIA	IIIA	IVA	VA	VI A	VIIA	0
	1	2	13	14	15	16	17	18
	Li		F			O	J	Ne
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	B	C		F	G			L

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You must see the position of the element in the periodic table.

Some elements are given in their own symbol and position in the periodic table, while others are shown with a letter. With reference to the table:

How many valence electrons are present in G?

A. 2

B. 3

C. 4

D. 5

Answer: D

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39. Consider the section of the periodic table given below.

Group numbers	IA	IIA	IIIA	IVA	VA	VI A	VIIA	0
	1	2	13	14	15	16	17	18
	Li		F			O	J	Ne
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You must see the position of the element in the periodic table.

Some elements are given in their own symbol and position in the periodic table, while others are shown with a letter. With reference to the table:

Write the formula of the compound between B and H.

A. BH

B. B_2H

C. BH_2

D. $(BH)_2$

Answer: B

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40. Consider the section of the periodic table given below :

Group	IA	IIA	IIIA	IVA	VA	VIA	VIIA	O
Numbers	1	2	13	14	15	16	17	18
	Li		D			O	J	Ne
	A	Mg	E	Si		H	K	
	B	C		F	G			L

In this table:

B does not represent Boron

C does not represent Carbon

F does not represent Fluorine

H does not represent Hydrogen

K does not represent Potassium

You must see the position of the element in the periodic table. Some elements are given in their own symbol and position in the periodic table. While others are shown with a letter.

With reference to the table :

What is the electronic configuration of Li ?

A. 1,2

B. 1, 1,1

C. 2,1

D. None of these

Answer: C

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