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CHEMISTRY

BOOKS - EVERGREEN CHEMISTRY (ENGLISH)

SPECIMEN QUESTION PAPER (CHEMISTRY)

Questions

1. What is the trend in metallic nature of metals as we go from top to bottom in a group?

A. increases

B. decreases

C. neither increases nor decreases

D. none of the above

Answer: A

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2. The colour change observed when the solution of magnesium hydroxide is tested with the following indicators:

A. phenolphthalein turns colourless to pink

B. methyl orange remains orange

C. phenolphthalein remains colourless

D. blue litmus solution turns red

Answer: A

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3. The compound which is a non-electrolyte.

A. KCl(aq)

B. H_2SO_4 (dil)

C. $CCl_4(I)$

D. $CH_3COOH(aq)$

Answer: C

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4. Twice the vapour density gives

A. Actual vapour density

B. Relative vapour density

C. Molecular mass

D. Molar volume

Answer: C

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5. The number of lone pairs of electrons in the nitrogen atom in ammonia molecule is?

A. One

B. Two

C. Three

D. Four

Answer: A

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6. Elements with similar valence shell configuration in a Periodic Table are placed in

A. different group

B. same period

C. different period

D. same group

Answer: D

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7. The gas liberated when Sodium Sulphite reacts with dilute sulphuric acid is

A. Carbon dioxide

B. Hydrogen

C. Hydrogen sulphide

D. Sulphur dioxide

Answer: D

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8. Thickness of metal coating during electroplating depends on:

A. Duration of current passage

B. A low current

C. Nature of cathode

D. Purity of anode

Answer: B

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9. Ionic bonding is seen in

A. Methane

B. Hydrogen

C. Ammonia

D. Sodium oxide

Answer: D

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10. The molecular formula of an organic compound is $C_6H_{12}O_6$ and the empirical formula is CH_2O the value of n is

A. 2

B. 6

C. 1

D. 12

Answer: B

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11. When an electron is added in the valence shell

A. energy is released

B. energy is absorbed

C. energy remains same

D. none of the above

Answer: A

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12. The most electronegative element is

A. Sodium

B. Aluminium

C. Bromine

D. Fluorine

Answer: D

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13. The bond in Carbon Tetrachloride is

A. Single Covalent Bond

B. Double Covalent Bond

C. Ionic bond

D. Triple Covalent Bond

Answer: A

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14. The type of bonding present in the nitrogen molecule

A. Single Covalent Bond

B. Double Covalent Bond

C. Polar Covalent bond

D. Triple Covalent Bond

Answer: D

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15. A compound with empirical formula XY2 has vapour density equal to its empirical formula weight its molecular formula is

A. X_2Y_4

B. X_2Y_2

C. XY

D. X_4Y_2

Answer: A

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16. Identify one statement that does not hold true for electrorefining of copper

A. Electrolyte is acidified $CuSO_4$ solution

B. Cathode is a thin strip of impure copper

C. Anode dissolves in the electrolyte

D. Anode gets thicker

Answer: D

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17. Write your observations for the chemical reactions and name the product formed :

When ammonium chloride is heated with sodium hydroxide.

A. A reddish brown gas

B. A colourless gas which turns moist red litmus blue

C. A green coloured gas which turns moist blue litmus paper red

D. A colourless gas which turns lime water milky.

Answer: B

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18. The colour of the precipitate formed when ferrous ions react with ammonium hydroxide solution

A. Blue

B. Reddish brown

C. Dirty green

D. White

Answer: C

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

A. Oxidation

B. Reduction

C. Redox

D. Displacement

Answer: A

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20. Give the reaction of oxide of metal that reacts with acid and alkali to form salt and water.

A. Sodium oxide

B. Magnesim oxide

C. Aluminium oxide

D. Ferrous oxide

Answer: C

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21. Which property decreases from left to right across the periodic table and increases from top to bottom?

(i) Atomic radius

(ii) Electronegativity

(iii) Ionisation energy

(iv) Metallic character

A. Electron affinity

B. Electro negativity

C. Ionisation energy

D. Metallic character

Answer: D

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22. On the basis of electronic configuration the period and group of B_5^9 is

A. 2 and IIIA

B. 3 and IIA

C. 4 and VIA

D. 5 and VIIA

Answer: A

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23. Select the ion , that would get selectively discharged from the aqueous mixture of the ions listed below:

SO_4^{2-}, NO_3^- and OH^-

A. SO_4^{-2}

B. NO_3^{-1}

C. OH^{-1}

D. Cl^{-1}

Answer: C

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24. Hydronium ion is formed when a molecule of water combines with

A. Hydrogen atom

B. Proton

C. Hydrogen molecule

D. Oxygen atom

Answer: B

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25. The condition that is most appropriate for electroplating with nickel:

A. Electrolyte is molten copper sulphate

B. Anode should be made of impure nickel plate

C. Alternating current is used

D. Periodic replacement of cathode is needed

Answer: B

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26. Name a hydroxide which is soluble in excess of ammonium hydroxide.

A. Lead hydroxide

B. Ferrous hydroxide

C. Zinc hydroxide

D. Ferric hydroxide

Answer: C

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27. Which statement is not true for electrolysis?

A. Cations migrate towards cathode

B. Anions discharge at anode

C. Anions get reduced during electrolysis

D. Cations get reduced during electrolysis

Answer: C

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28. H_2Y is the formula of a compound. What is the valency exhibited by Y?

A. 1

B. 2

C. 3

D. none of the above

Answer: B

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29. Name the charged particles which attract one another to form electrovalent compounds.

A. Electrons

B. Proton

C. Ions

D. Molecules

Answer: C

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30. Which one of the following statements is NOT correct?

A. Pure water does not allow a current to flow through it

B. The electrolyte only conducts when in the molten state

C. Electrodes that react with the electrolytes are said to be "active"

D. Ions must be present in the electrolyte in order that it conducts electricity

Answer: B

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31. The salt formed by partial replacement of hydrogen ion of an acid by a basic radical

A. Sodium sulphite

B. Magnesium hydroxide

C. Potassium sulphate

D. Zinc hydrogen sulphite

Answer: D

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32. Alkali which dissociates only partially in aqueous solution:

A. Lithium hydroxide

B. Calcium hydroxide

C. Potassium hydroxide

D. Sodium hydroxide

Answer: B

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33. The property that matches with elements of the halogen family are:

A. They are chemically highly reactive

B. They are metallic in nature

C. They are monoatomic in their molecular form

D. They have one electron in the valence shell

Answer: A

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34. Cathode is a reducing electrode because:

A. It has less number of electrons

B. It has deficiency of electrons

C. Cations gain electrons from cathode

D. Anions lose electrons to cathode

Answer: D

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35. The simplest ratio of the atoms of carbons and hydrogen is 1:1 identify the possible molecular formula

(a)C6H6

(b)C2H4

(c)C6H2

(d)C3H4

A. C_6H_6

B. C_2H_4

C. C_6H_2

D. C_3H_4

Answer: A

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36. The empirical formula of the compound is CH_2O, the possible molecular formula can be

A. $C_3H_6O_3$

B. C_2H_4O

C. $C_4H_3O_2$

D. $C_4H_6O_2$

Answer: A

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37. Observe the Periodic Table to answer the questions :

Group No.	1-IA	2-IIA	13-IIIA	14-IVA	15-VA	16-VIA	17-VIIA	18-0
2nd period	Li		D			O	J	Ne
3rd period	A	Mg	E	Si		X	M	
4th period	R	T	G		Q	Y		Z

In the above table some elements are mentioned with their own symbol and position of the Periodic Table while others are shown with a letter. Answer the following questions pertaining to the same.

Identify the most electronegative element

A. Li

B. Ne

C. Z

D. J

Answer: D

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38. Observe the Periodic Table to answer the questions :

Group No.	1-IA	2-IIA	13-IIIA	14-IVA	15-VA	16-VIA	17-VIIA	18-0
2nd period	Li		D			O	J	Ne
3rd period	A	Mg	E	Si		X	M	
4th period	R	T	G		Q	Y		Z

In the above table some elements are mentioned with their own symbol and

position of the Periodic Table while others are shown with a letter. Answer the following questions pertaining to the same.

How many Valence electrons are present in Q?

A. 3

B. 5

C. 15

D. 4

Answer: A

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39. Observe the Periodic Table to answer the questions :

Group No.	1-IA	2-IIA	13-IIIA	14-IVA	15-VA	16-VIA	17-VIIA	18-0
2nd period	Li		D			O	J	Ne
3rd period	A	Mg	E	Si		X	M	
4th period	R	T	G		Q	Y		Z

In the above table some elements are mentioned with their own symbol and position of the Periodic Table while others are shown with a letter. Answer the following questions pertaining to the same.

The formula of the compound formed between E and O is

A. EO

B. E_3O_2

C. E_2O_3

D. EO_2

Answer: C

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40. Observe the Periodic Table to answer the questions :

Group No.	1-IA	2-IIA	13-IIIA	14-IVA	15-VA	16-VIA	17-VIIA	18-0
2nd period	Li		D			O	J	Ne
3rd period	A	Mg	E	Si		X	M	
4th period	R	T	G		Q	Y		Z

In the above table some elements are mentioned with their own symbol and position of the Periodic Table while others are shown with a letter. Answer the following questions pertaining to the same.

The type of bond formed between A and X

A. Ionic bond

B. Metallic bond

C. Covalent bond

D. Coordinate bond

Answer: A

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