CHEMISTRY

JEE MAIN AND ADVANCED

MOCK TEST 2

Example

1. Find moles of electrons present in 64 g of CH_4

A. 64

B. 40

C. 24

D. 16

Answer: B

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2. Find number of oxygen atoms present in $100mg$ of $CaCO_3$. (Atomic mass of Ca = 40 u, C = 12 u, O = 16 u)

A. 6.02×10^{23}

B. 6.02×10^{20}

C. 1.806×10^{21}

D. 1.204×10^{20}

Answer: C

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3. Which among the following has highest number of atoms?

A. 5 g of CO_2

B. 4 g of CO

C. 1 g of H_2

D. 6 g of O_3

Answer: C

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4. Total number of electrons in $81g$ of Al^{3+} are (Given : at. no. of Al =13 and at mass =$27u$)

A. 1.806×10^{25}

B. 6.02×10^{24}

C. 1.22×10^{25}

D. 2.347×10^{25}

Answer: A

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5. Find the ratio of the number of atoms present in $16g$ of O_2 and $32g$ ofO_3.

A. 1 : 1

B. 2 : 1

C. 1 : 3

D. 1 : 2

Answer: D

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6. $896mL.$ of a mixture of $CO$and CO_2 weigh $1.28g$ at NTP. Calculate the volume of CO_2 in the mixture at NTP.

A. $448ml$

B. $672ml$

C. $224ml$

D. $500ml$

Answer: C

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7. A sample of ammonium phosphate, $(NH_4)_3PO_4$ contains 18 moles of hydrogen atoms. The number of moles of oxygen atoms in the sample is

A. 6

B. 18

C. 4

D. 24

Answer: A

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8. Find the charge of $48g$ of Mg^{2+} ions in coulombs

A. $2.4 \times 10^{23} C$

B. $6.82 \times 10^{5} C$

C. $3.86 \times 10^{5} C$

D. $1.93 \times 10^{5} C$

Answer: C

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9. Calculate the percentage of water of crystalline in Blue vitrial $CuSO_4.5H_2O$ (Atomic masses are given as $Cu = 63.5, S = 32, O = 16, H = 1$

A. 0.072

B. 0.36

C. 0.5642

D. 0.64

Answer: B

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10. A non-reacting gaseous mixture contains SO_2 and SO_3 in the mass ratio of $1:5$. Find the ratio of the number of molecules

A. $1:1$

B. $4:5$

C. $1:4$

D. $1:5$

Answer: C

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11. A hydrocarbon contains $91.3\,\%$ carbon by mass. Find the empirical formula of hydrocarbon?

A. CH

B. C_2H_3

C. C_7H_8

D. C_3H_5

Answer: C

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12. An organic compound of carbon, hydrogen and nitrogen contains these elements having mass

percentage $66.67\,\%$,$7.41\,\%$ and$25.92\,\%$ respectively. Calculate empirical formula

A. C_3H_4N

B. C_2H_6N

C. C_4H_4N

D. C_4H_9N

Answer: A

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13. Myoglobin stores oxygen for metabolic process in muscle. Chemical analysis shows that it contains$0.32\,\%$ Fe by mass. If there is one Fe atom per molecule of

myoglobin, what is the molar mass of myoglobin? (at. mass of $Fe = 56u$)

A. $1.75 \times 10^4 \frac{g}{m} ol$

B. $3.5 \times 10^5 \frac{g}{m} ol$

C. $1 \times 10^4 \frac{g}{m} ol$

D. $2.5 \times 10^5 \frac{g}{m} ol$

Answer: A

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14. Chlorophyll is a biomolecule responsible for green colour in the plants. Chlorophyll contains $2.68\,\%$ of

magnesium by mass. Calculate the number of magnesium atoms in $6g$ of chlorophyll $(Mg = 24)$

A. 2.01×10^{21}

B. 4.03×10^{21}

C. 6.02×10^{23}

D. 4.03×10^{23}

Answer: B

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15. What volume ofCCI_4 $\left(d = 1.6\frac{g}{cc}\right)$ contain $6.02X10^{25}$ CCI_4 molecules$(CI = 35.5)$

A. 10.5 L

B. 250 mL

C. 9.625 L

D. 1.712 L

Answer: C

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16. A sample of $KCIO_3$ on decomposition yielded $448mL$ of oxygen gas at STP, then the weight of $KCIO_3$ originally taken was

A. $0.815g$

B. $1.63g$

C. $3.27g$

D. $2.45g$

Answer: B

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17. $5g$ of hydrogen reacts with $32g$ of oxygen to form moles of water

A. 1

B. 2

C. 3

D. 4

Answer: B

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18. What volume at STP of CO is required to reduce one mole of Fe_2O_3 in the following reaction $Fe_2O_3 + CO \rightarrow Fe + CO_2$

A. $11200cm^3$

B. $22400cm^3$

C. $67200cm^3$

D. $33600cm^3$

Answer: C

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19. In the reaction $4A + 2B + 3C \rightarrow A_4B_2C_3$, the number of moles of product formed will be if starting from 2 moles of A, 1.2 moles of B and 1.44 moles of C

A. 0.48

B. 0.3

C. 0.6

D. 1

Answer: A

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20. If in the given reaction ,$3I_2 + OH^- \rightarrow IO_3^- + 5I^{-2}$ moles of iodine are taken, then the ratio of iodate and iodide ions formed in the alkaline medium is

A. 1 : 5

B. 3 : 5

C. 5 : 1

D. 5 : 3

Answer: A

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21. Calculate the weight of carbon which is burnt with excess of oxygen to form $22.4L$ of CO_2 at NTP

A. 4 g

B. 6 g

C. 12 g

D. 24 g

Answer: C

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22. $10g$ of S reacts with excess of O_2 to form $15g$ of SO_2. The $\%$ yield of the reaction is

A. 0.25

B. 0.5

C. 0.75

D. 1

Answer: C

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23. $20ml$ ofCO is exploded with $30ml$ ofO_2at constant temperature and pressure. Final volume of the gases in ml will be

A. 35

B. 40

C. 50

D. 60

Answer: B

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24. if 50 atoms of carbon reacts with 200 molecules of oxygen, find out the correct statement(s)

A. O_2 is the limiting reagent

B. 50 molecules of CO_2 are formed

C. 100 molecules of CO_2 are formed

D. Both (1) & (2)

Answer: B

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25. What is stoichiometric coefficient of Ca in the following reaction? $Ca + Al^{3+} \rightarrow Ca^{2+} + Al$

A. 1

B. 1.5

C. 2

D. 3

Answer: D

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26. If 'x' dm^3 of N_2 react with $10 dm^3$ of H_2 to form NH_3 under suitable conditions, then

A. H_2 is limiting reagent

B. N_2 is limiting reagent

C. Both reactants are limiting reagents

D. NH_3 is limiting reagent

Answer: A

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27. Moles of $KCIO_3$ required for producing sufficient O_2 to react with 1 mole of aluminium will be (Molar mass of $KCIO_3 = 122.5$)

A. 2 mole

B. 1 mole

C. 1/2 mole

D. 3/2 mole

Answer: C

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28. On heating $1.763g$ of hydrated $BaCl_2$ to dryness, $1.505g$ of anhydrous salt remained. Hence the formula of the hydrate is (Atomic weight of Ba $= 137$)

A. $BaCl_2.\ \frac{1}{2}H_2O$

B. $BaCl_2.\ H_2O$

C. $BaCl_2.\ 2H_2O$

D. $BaCl_2.5H_2O$

Answer: C

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29. A mixture of N_2 and H_2 is caused to react in a closed container to form NH_3. The reaction decreases before any of the reactant has been totally consumed. At this stage, 2 moles each of N_2, H_2andNH_3 are present. Then the weight of N_2 and H_2 present originally were respectively

A. 112 g and 8 g

B. 84 g and 10 g

C. 84 g and 8 g

D. 122 g and 10 g

Answer: B

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30. The equation $2Al(s) + \frac{3}{2}O_2 \rightarrow Al_2O_3(s)$ shows that

A. 2 moles of aluminium react with 3/2 moles of oxygen to produce one mole of aluminium oxide

B. 2 atoms of aluminium react with 3/2 atoms of oxygen to produce one atom of aluminium oxide

C. 2g of aluminium react with 3/2 g of oxygen to produce 1 g of aluminium oxide

D. 2g of aluminium react with 3/2 litres of oxygen to produce 1 g of aluminium oxide

Answer: A

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31. Give the correct order of initials T(true) or F(false) for following statements.

(a) Micelles formation takes place only above craft temperature

(b)ZSM-5 is a type of zeolites used as a catalyst in petrochemical industries.

(c)A micell is an aggregation of surfactants in in aqueous solution, often spherical

(d) Lyophilic sols are irreversible sols

A. T F F T

B. T T F F

C. T T T F

D. F T T F

Answer: C

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32. In an adsorption experiment, a graph of log(x/m) versus log P was found to be linear with a slope of 45°, and the the intercept of of 0.3010. The amount of gas adsorbed per gram charcoal under a pressure of 0.8 bar is

A. 1.2

B. 1.4

C. 1.6

D. 1.8

Answer: C

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33. Which gas will be adsorbed on solid to greater extent?

A. A gas having non polar molecules with lowest critical temperature (T_c)

B. A gas having non polar molecules with highest critical pressure (P_c)

C. A gas having polar molecules with highest critical temperature (T_c)

D. A gas having non polar molecules with lowest critical pressure (P_c)

Answer: C

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34. According to the adsorption theory of catalysis, the speed of the reaction increases because:

A. In the process of adsorption, the concentration of the molecules decreases at the surface of catalyst

B. Adsorption produces heat which increases the speed of the reaction

C. Adsorption lowers the activation energy of the reaction

D. Adsorption increases the activation energy of the reaction

Answer: C

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35. Which of the following justify the enthalpy driven spontaneity of adsorption process?

A. It is a spontaneous endothermic processin which randomness increases due to force of repulsion between adsorbent and adsorbate

B. It is a a spontaneous exothermic process in which randomness decreases due to force of attraction between adsorbent and adsorbate

C. It is a spontaneous adiabatic process in which randomness increases due to free expansion of molecule between adsorbent and adsorbate

D. Itis a non spontaneous endothermic process in which randomness decreases due to force of repulsion between adsorbent and adsorbate

Answer: B

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36. Choose the incorrect statement pertaining to the adsorption of gas on a solid surface

A. Adsorption is always exothermic

B. Physisorption may transform into chemisorption at high temperature

C. Physisorption increases with increasing temperature but chemisorption decreases with increasing temperature

D. Chemisorption is more exothermic than physisorption, however it is very slow due to higher energy of activation

Answer: C

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37. Among the following, the surfactant that will form micelles in aqueous solution at the lowest molar concentration at ambient condition is

A. $CH_3(CH_2)15N^+(CH_3)_3Br^-$

B. $CH_3(CH_2)_{11}N^+(CH_3)_3Br^-$

C. $CH_3(CH_2)_6COO^-Na^+$

D. $CH_3(CH_2)_{11}OSO3^-Na^+$

Answer: A

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38. Which of the following is lyophilic sol?

A. Silver sol

B. As_2S_3 sol

C. Sulphur sol

D. Gelatin sol

Answer: D

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39. Which of the following is an incorrect statement?

A. Most heterogeneous catalytic reactions involve the solid surface of the catalyst

B. Heterogeneous catalyst primarily function by lowering the activation energy of the reaction

C. A solid catalyst present in the power form is more effective as it has large surface area

D. The catalyst may be deactivated by heating it to a high temperature in vacuum

Answer: D

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40. Which of the following Freundlich adsorption isotherm represents the adsorption of a gas by a solid (P_s=Saturation pressure)

A. 

B. (##AAK_MCP_21_NEET_CHE_E21_010_Q02##)

C. (##AAK_MCP_21_NEET_CHE_E21_010_Q03##)

D. 

Answer: A

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41. Which of the following methods could be e employed for the preparation of As_2S_3 sol?

A. Colloidal mill method

B. Double decomposition method

C. Bredig's arc method

D. Peptization

Answer: B

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42. Surface tension of lyophobic sols is usually

A. Lower than dispersion medium

B. More than dispersion medium

C. Equal to dispersion medium

D. Can't predict

Answer: A

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43. Which of the following is true is respect of chemical adsorption (chemisorption)?

A. $\Delta H < 0,\ \Delta S > 0,\ \Delta G > 0$

B. $\Delta H < 0,\ \Delta S < 0,\ \Delta G < 0$

C. $\Delta H > 0,\ \Delta S > 0,\ \Delta G < 0$

D. $\Delta H > 0,\ \Delta S < 0,\ \Delta G > 0$

Answer: B

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44. 10% sites of catalyst bed have adsorbed H_2. On heating, H_2 gas is evolved from sites and collected at 0.03 atm and 300K in a small vessel of $2.46cm^3$. Number of sites available is $7.2 \times (10)^{16}$ per cm^2 and surface area is $1000cm^2$. The number of surface sites are

occupied by one molecule of H_2 is [Given: $N_A = 6 \times (10)^{23}$]

A. 1

B. 2

C. 3

D. 4

Answer: D

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45. Bredig's arc method involves

A. Only dispersion of metal

B. Only condensation of metal

C. Dispersion as well as condensation

D. Neither dispersion nor condensation

Answer: C

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46. The electrical charge on the the colloidal particles is indicated by

A. Ultramicroscope

B. Molecular sieves

C. Electrophoresis

D. Brownian movement

Answer: C

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47. The gold number of protective colloids A,B,C and D are 0.02, 0.002, 10 and 30 respectively. then the protective powers of A,B,C and D are in the order

A. $D > C > A > B$

B. $D > C > B > A$

C. $A > B > C > D$

D. $B > A > C > D$

Answer: D

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48. For the coagulation of 40ml of ferric hydroxide sol, 10ml of 0.4 M KCI is required. Then, coagulation value of KCI is

A. 10

B. 50

C. 100

D. 40

Answer: C

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49. Which of the following given statements is/are correct?

(a) cold cream is an example of (W/O) type emulsions,

(b)electrical conductance of aqueous emulsions is less than that of oil emulsions

(c) emulsions cannot be broken into constituent liquids by heating or freezing

(d) an emulsion can be diluted with water, then it forms (O/W) type emulsion

A. (a) and (d)

B. only (a)

C. (a), (b) & (c)

D. (a) ,(c) & (d)

Answer: A

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50. Range the following electrolytes in the increasing order of coagulating power for the coagulation of As_2S_3 sol

(I) $MgSO_4$

(II) $BaCl_2$

(III) $NaCl$

A. $III > I > II$

B. $I > II > III$

C. $III > II > I$

D. $I > III > II$

Answer: C

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51. The factors responsible for the stability of lyophilic sols are

A. Charge and solvation of colloidal particles

B. Large particle size only

C. Electrical charge only

D. Brownian movement and larger size

Answer: A

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52. To stop bleeding from an injury ferric chloride can be applied. Which of the following comment (s) about the statement is justified?

(a) it is not true, ferric chloride is highly poisonous

(b) it is true, Fe^{3+} ions coagulate blood which is negatively charged sol.

(c) it is true, coagulation takes place because of formation of negatively charged sol with Cl^- ions

(d) it is not true, Cl^- ions form positively charged sol, profuse bleeding takes place (e) it is not true, ferric chloride is ionic and gets into blood stream

A. only (c)

B. (b) & (c)

C. only (b)

D. (a), (d) & (e)

Answer: C

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53. Match the items given in column-I with that in column-II column-I (I) Fool's gold (II) Corundum (III) Diaspore (IV) Calamine column-II

(a)Al_2O_3 (b) Sulphide ore (c)$ZnCO_3$ (d)$Al_2O_3H_2O$ (e) Sulphide of zinc

A. I(c), II(d), III(a), IV(e)

B. I(b), II(a), III(d), IV(c)

C. I(e), II(d), III(a), IV(c)

D. I(d), II(c), III(b), IV(a)

Answer: B

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54. A certain metal M ocas in four compounds namely A,B,C and D. A has 20% of M, B has 68% of M, C has 73% of M and D has 60% of M. If metal M is extracted from A,B,C and D, it costs Rs 35 per kg, Rs 40 per kg, Rs 100 per kg

and Rs 45 per kg respectively. which mineral can be considered as an effective ore of M?

A. A

B. B

C. C

D. D

Answer: B

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55. The incorrect statement regarding froath floatation process is

A. It is based on the difference in gravities of the ore

B. Uses Cresols as froath stabilizers

C. Uses of pine oil as frothing agent

D. Uses sodium ethyl xanthate,$C_2H_5OCS_2Na$ as collector

Answer: A

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56. Which of the following given properties of colloidal particles is its optical property?

A. Brownian movement

B. Colligative properties

C. Electro-osmosis

D. Tyndall effect

Answer: D

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57. Match the methods of concentration of ore given in column-I with the different ores given in column-II and select the correct option.

column-I (I) magnetic separation (II) froth flotation (III) hydraulic washing column-II (a) Cu_2S (b) Fe_3O_4 (c) $Al_2(SiO_3)$

A. I(a), II(b), III(c)

B. I(b), II(a), III(c)

C. I(c), II(a), III(b)

D. I(b), II(c), III(a)

Answer: B

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58. Oxidation state of the metal in the minerals haematite and magnetite respectively are

A. II, III in haematite and III in magnetite

B. II, III in haematite and II in magnetite

C. II in haematite and II,III in magnetite

D. III in haematite and II,III in magnetite

Answer: D

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59. Which of the following statements is/are incorrect?

(a) Cassiterite is not the ore of tin

(b) Metallurgy is a process of mixing of ore

(c) concentration of chromite ($FeO.Cr_2O_3$) is done by magnetic separation

(d) ZnS with depressant NaCN forms $Na_2\left[Zn(CN)_4\right]$

A. (a) & (b)

B. only (a)

C. (b),(c) & (d)

D. (c) & (d)

Answer: A

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60. On addition of 1 ml of solution of 10% NaCl to 100ml corporate gold sol in presence of 0.25g of starch, the coagulation is just prevented. The gold number of starch is

A. 0.025

B. 0.25

C. 2.5

D. 25

Answer: D

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61. Hydrogen has three isotopes, the number of possible diatomic molecules will be

A. 3

B. 6

C. 8

D. 9

Answer: B

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62. Hydrogen gas reduces which metal ion in its aqueous solution?

A. Mg^{2+}

B. Li^{+}

C. Pd^{2+}

D. Zn^{3+}

Answer: C

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63. Hydrogen acts as a reducing agent and thus resembles

A. Hydrogen

B. alkali metals

C. Nobel gas

D. both 1 and 2

Answer: B

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64. In which of the compounds, the oxidation state of hydrogen is -1

A. H_2O

B. CaH_2

C. HBr

D. H_2S

Answer: B

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65. An element reacts with hydrogen to form a compound X which on treatment with water liberates hydrogen gas.

The element can be

A. Fluorine

B. Nitrogen

C. Sodium

D. Oxygen

Answer: C

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66. High purity (> 99.95%) dihydrogen is obtained be electrolysing

A. $dilH_2SO_4$ solutions

B. dil NaOH solutions

C. Aquash $Ba(OH)_2$ solutions

D. Aquash KOH solutions

Answer: C

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67. Only temporary hardness in water is removed by :

A. calgon's method

B. clark's method

C. lon-exchange method

D. synthetic resins method

Answer: B

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68. In Clark's method the chemical used to remove hardness of water us

A. Na_2CO_3

B. $Ca(OH)_2$

C. NaOH

D. $CaCO_3$

Answer: B

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69. Heavy water is

A. H_2O

B. Water containing $Mg^{2+}\&ca^{2+}$ ions

C. D_2O

D. Water at 4 degree celcius

Answer: C

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70. The incorrect statement about the structure of H_2O_2 is

A. It is non-linear and non-planar molecule

B. It has an open book type structure

C. Dihedral angle in both gas phase and solid phase is 111.5deg

D. Dihedral angle in gas phase is 111.5deg and in solid phase is 90.2deg

Answer: C

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71. Percentage strength of 20 volume H_2O_2 solution is

A. 0.03

B. 6 %

C. 0.2

D. 0.15

Answer: B

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72. Which of the following metals will react directly with nitrogen to form nitride?

A. Na

B. K

C. Cs

D. Li

Answer: D

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73. Which is the correct order for the hydration energy of alkali metal ions?

A. $Li^+ > K^+ > Na^+ > Rb^+ > Cs^+$

B. $Li^+ > Na^+ > K^+ > Cs^+ > Rb^+$

C. $Li^+ > Na^+ > K^+ > Rb^+ > Cs^+$

D. $Li^+ > K^+ > Na^+ > Cs^+ > Rb^+$

Answer: C

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74. The colour given to the flame by sodium salt is

A. Violet

B. Green

C. Blue

D. Golden yellow

Answer: D

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75. The following pair that cannot exist in solution is

A. NaOH and KOH

B. NaCl and KCl

C. $NaHCO_3$ and NaOH

D. Na_2CO_3 and NaOH

Answer: C

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76. When NaOH is prepared in Castner-Kellner cell,the gas evolved at the anode is

A. O_2

B. O_3

C. Cl_2

D. HCl

Answer: C

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77. For alkali metals, which of the following trends is incorrect?

A. Melting point : $Li > Na > K > Rb$

B. $Density$: $Rb > Na > K > Li$

C. Metallic radius: $Rb > K > Na > Li$

D. Ionization enthalpy : $Li > K > Na > Rb$

Answer: D

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78. Which among the following carbonates is thermally least stable?

A. K_2CO_3

B. Li_2CO_3

C. Na_2CO_3

D. Rb_2CO_3

Answer: B

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79. Which is incorrect statement about lithium and magnesium?

A. Lithium and magnesium do not form superoxide

B. LiCl and MgCl, are soluble in ethanol

C. Li and Mg salts do not respond to flame test

D. Carbonates of Li and Mg decompose easily on heating

Answer: C

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80. Which of the following is not required in the Solvay's process for the manufacture of Na_2CO_3?

A. NH_3

B. CO_2

C. NaCl

D. CO

Answer: D

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81. What is formed when calcium carbide reacts with heavy water?

A. C_2D_6

B. C_2D_4

C. C_2D_2

D. C_2D_5OD

Answer: C

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82. The most thermally unstable carbonate among thefollowing is

A. $CaCO_3$

B. $MgCO_3$

C. $BeCO_3$

D. $BaCO_3$

Answer: C

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83. The order of basic strength of alkaline earth metal hydroxide is

A.

$$Be(OH)_2 > Mg(OH)_2 > Ca(OH)_2 > Ba(OH)_2$$

B. $Be(OH)_2 > Mg(OH)_2 Ca(OH)_2 > Ba(OH)_2$

C. $Ba(OH)_2 > Ca\left(OH_2 > Mg(OH)_2 > Ba(OH)_2\right.$

D.

$$Ba(OH)_2 > Ca(OH)_2 > Be(OH)_2 > Mg(OH)_2$$

Answer: C

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84. Dead burnt plaster is

A. $CasO_4.2H_2O$

B. $CasO_4.\left(\frac{1}{2}\right)H_2O$

C. $CaSO_3$

D. $CaSO_4$

Answer: C

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85. Which of the following is least soluble in water?

A. $MgSO_4$

B. $CaSO_4$

C. $BeSO_4$

D. $BaSO_4$

Answer: D

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86. Hydrolith is

A. CaH_2

B. $Ca(OH)_2$

C. $CaCO_3$

D. $CaSO_4$

Answer: A

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87. Select the incorrect statement about beryllium and aluminium?

A. Chlorides of beryllium and aluminium are soluble in organic solvents

B. Beryllium and aluminium hydroxides are soluble in excess of alkali

C. Chlorides of beryllium and aluminium are strong lewis acids

D. Aluminium and beryllium readily react with mineral acid to give hydrogen gas

Answer: D

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88. CaO does not react with

A. SiO_2

B. P_4O_{10}

C. CO_2

D. MgO_2

Answer: D

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89. Which is not considered as a constituent of portland cement?

A. Ca_2SiO_4

B. Ca_3SiO_5

C. $Ca_3Al_2O_6$

D. $CaSiO_3$

Answer: D

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90. The alkaline earth metal ion present in chlorophyll is among the metal

A. Ca

B. Mg

C. Be

D. Ba

Answer: B

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91. Concentration of Ca ion in blood plasma is(approximately)

A. $10mgL^{-1}$

B. $100mgL^{-1}$

C. $50mgL^{-1}$

D. $25mgL^{-1}$

Answer: B

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92. Which of the following metals do not combine directly with hydrogen gas to form hydride?

A. Mg

B. Ca

C. Be

D. Sr

Answer: C

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93. Which is incorrect physical property order for the given alkaline earth metals?

A. Metallic radius : $Ba > Sr > Ca > Mg > Be$

B. Reducing nature : $BaSr > Ca > Mg > Be$

C. Density : $Ba > Sr > Be > Mg > Ca$

D. Negative hydration enthalpy :

$$Be^{2+} > Mg^{2+} > Ca^{2+} > Ba^{2+} > Sr^{2+}$$

Answer: D

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94. P_1:Chloride of A imparts brick red colour to the flame.Select the correct statement P_2:Shape of D is trigonal pyramidal.P_3 : E does not decompose on

heating.P_4: is used to remove temporary hardness of water...

A. P_2, P_3, P_4

B. P_1, P_2, P_4

C. P_1, P_3, P_4

D. P_1, P_2, P_3

Answer: B

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95. Among the following given chlorides, covalent in nature is

A. $MgCl_2$

B. $CaCl_2$

C. $BeCl_2$

D. $BaCl_2$

Answer: C

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96. The compound which is not formed on heating $Be(NO_3)_2$ is

A. N_2O

B. O_2

C. NO_2

D. BeO

Answer: A

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97. The correct decreasing order of 1^st ionization energy of 13-group elements is

A. $B > Al > Ga > In > Tl$

B. $B > Tl > Ga > Al > In$

C. $B > Ga > Al > Tl > In$

D. $Al > B > Ga > In > Tl$

Answer: B

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98. Which of the following oxides is amphoteric in nature?

A. Al_2O_3

B. B_2O_3

C. Tl_2O_3

D. In_2O_3

Answer: A

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99. Which of the given statements is incorrect about boric acid?

A. It is a weak monobasic acid

B. It is not a protonic acid

C. It acts as a lewis acid by accepting electrons

D. It is a tribasic acid

Answer: D

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100. Laboratory method for the preperation of diborane involves the oxidation of

A. Sodium borohydride with iodine

B. Sodium borohydride with fluorine

C. Sodium borohydride with chlorine

D. Sodium borohydride with $KMnO_4$

Answer: A

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101. When borax bead containing a small amount of metal salt ws heated in reducing flame of bunsane

burner, the colour of the bead after heating was blue . The metal presence in the salt would be

A. Manganese

B. Nickel

C. Cobalt

D. Chromium

Answer: C

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102. Stability order of monovalent cations Ga^+, In^+, Tl^+ is given as

A. $Ga^+ > In^+ > Tl^+$

B. $Ga^+ > Tl^+ > In^+$

C. $Tl^+ > In^+ > Ga^+$

D. $Tl^+ > Ga^+ > In^+$

Answer: C

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103. Which statement is incorrect about graphite?

A. It is layered structure

B. Layers are heald by van der Waal force of attraction

C. It is used as a dry lubricant

D. Each carbon in hexagonal ring is sp^3 hybridised

Answer: D

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104. Producer gas is a mixture of

A. $CO_2 + H_2$

B. $CO + H_2$

C. $CO + N_2$

D. $CO + O_2$

Answer: C

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105. Select the incorrect statement amoung the following

.

A. Zeolites are used in petrochemical industries for cracking of hydrocarbons

B. Zeolites has two dimensional structure

C. Hydrated zeolites are used as ion exchangers in softening of hard water

D. ZSM-5 is used to convert alcohols directly into gasoline

Answer: B

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106. Which of the following statements is incorrect?

A. Silica gel is used a drying agent

B. Silicon is extensively used as a semiconductor

C. SiO_2 is an acidic oxide

D. Silicon exist in free state in nature

Answer: D

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107. Borax dissolves to give

A. $NaOH + B_2O_3$

B. $NaOH + B_2H$

C. $NaOH + H_3BO_3$

D. $NaOH + HBO_2$

Answer: C

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108. Starting materials for the preperation of inorganic benzene is

A. $B_2H_6 + HN_3$

B. $BH_3 + NH_2NH_2$

C. $B_2H_6 + NH_3$

D. $BH_3 + NH_2OH$

Answer: C

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109. A compound of boron, A on heating swells up which on further heating forms glassy transparent mass B. The chemical constituent B is/are

A. $Na_2B_4O_7$ only

B. $NaBO_2$ only

C. $NaBO_2 + B_2O_3$

D. $Na_2B_4O_7 + B_2O_3$

Answer: C

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110. Choose the correct answer

A. Both $(CH_3)_3N$ and $(SiH_3)_3N$ are pyramidal

B. Both $(CH_3)_3N$ and $(SiH_3)_3N$ are triangular planar

C. $(CH_3)_3N$ is pyramidal and $(SiH_3)_3N$ is triangular

D. $(CH_3)_3N$ is triangular and $(SiH_3)_3N$ is pyramidal

Answer: C

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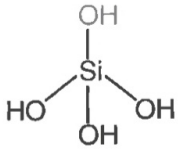
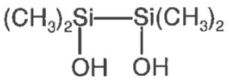
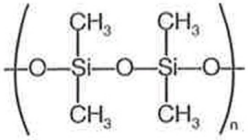
111. Heating of $(CH_3)_2SiCl_2$ in the presence of water gives

A. $(CH_3)_2Si = O$

B. 

C. 

D. 

Answer: D

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112. Which gas is obtained by the thermal decomposition of ammonium dichromate?

A. O_2

B. NH_3

C. N_2

D. NO

Answer: C

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113. With which metal ion, aqueous ammonia reacts to give a deep blue solution?

A. $Ag^{\oplus}$

B. Mg^{2+}

C. $Li^{\oplus}$

D. Cu^{2+}

Answer: D

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114. Which among the following in a paramagnetic compound?

A. N_2O

B. NO

C. N_2O_3

D. N_2O_4

Answer: B

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115. When copper is treated with dilute nitric acid, the gas evolved is

A. N_2

B. NO_2

C. NO

D. NH_3

Answer: C

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116. Brown ring test s performed for which ion?

A. NO_2^-

B. NO_3^-

C. HO^-

D. H_2N^-

Answer: B

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117. Shape of H_3PO_4 is

A. Pyramidal

B. Tetrahedral

C. See-saw

D. Square planar

Answer: B

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118. P - P - P bond angle in white phosphorous is

A. 60°

B. 90°

C. 120°

D. $109^\circ 28$

Answer: A

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119. Which among the following is not obtained by treating aqueous silver nitrate with hypophosphorous acid?

A. H_3PO_3

B. Ag

C. HNO_3

D. H_3PO_4

Answer: A

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120. Which oxide of nitrogen is coloured gas?

A. N_2O

B. NO

C. N_2O_5

D. NO_2

Answer: D

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121. When silver chloride is treated with aqueous ammonia, the complex obtained is

A. $\left[Ag(NH_3)_4\right]^{\oplus}$

B. $\left[Ag(NH_3)_6\right]^{\oplus}$

C. $\left[Ag(NH_3)_2\right]^{\oplus}$

D. $\left[Ag(NH_3)(H_2O\right]^{\oplus}$

Answer: C

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122. Which gas is obtained on dissolving zinc is not dilute nitric acid?

A. NH_3

B. NO_2

C. NO

D. N_2O

Answer: D

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123. Which of the following gas is used in oxyacetylene welding

A. O_2

B. N_2

C. NH_3

D. CO_2

Answer: A

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124. Phosphine is not obtained by which of the following reaction?

A. White P is heated witch conc. NaOH in an inert atmosphere of CO_2

B. Calcium phosphide treated with water

C. Phosphonium iodide treated with KOH

D. PCl_5 treated with water

Answer: D

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125. Nitric acid can be obtained from ammonia via the formation of which intermediate compounds in Ostwald's process?

A. Nitrogen and nitrous oxide

B. Nitric oxide and nitrogen pentaoxide

C. Nitric oxide and nitrogen dioxide

D. Nitrogen and nitric oxide

Answer: C

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126. Number of single and double $P-O$ bonds in P_4O_{10} respectively are

A. $8, 4$

B. 10 , 4

C. 12 , 4

D. 10 , 2

Answer: C

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127. Formula of peroxodisulphuric acid(Marshall"s acid) is

A. H_2SO_5

B. $H_2S_2O_5$

C. $H_2S_2O_7$

D. $H_2S_2O_8$

Answer: D

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128. Which of the following statements regarding conc. Sulphuric acid is not correct?

A. It is reduced to SO_2 on reaction with Cu.

B. It is a strong dehydrating agent.

C. It can be used to manufacture more volatile acids from their corresponding salts.

D. The absorption of SO_2 is sulphuric acid produces oleum.

Answer: D

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129. Which of the following statements reagarding interhalogen compound is a gas at 298K?

A. ICI

B. IBr

C. BrF_5

D. CIF

Answer: D

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130. Which of the following statements reagarding interhalogens is not correct?

A. Interhalogens involve covalent bonding

B. Interhalogens are less reactive than halogens

C. $(ICI_3)_2$ in fused from shows enhanced electrical conductivity

D. Interhalogens of the formula XX_4

Answer: B

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131. Which of the following hydrogen halide is liquid at 273K?

A. HI

B. HBr

C. HCl

D. HF

Answer: D

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132. The acidic strength of oxyacids follow the order

A. $HClO_3 > HClO_2 > HOCl$

B. $HClO_3 < HClO_2 < HOCI$

C. $HClO_3 > HClO_2 < HOCI$

D. $HClO_3 < HClO_2 > HOCI$

Answer: A

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133. Amongst hexahalides of sulphur, SF_6 is exceptionally stable due to

A. See- saw geometry

B. High polarization power

C. Least steric hindrance

D. Dimeric in nature

Answer: C

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134. Dispersion of tear gas happens during riots, the formula of tear gas is

A. $COCl_2$

B. CCl_3NO_2

C. $CHCl_2NO_2$

D. $CHCl_3$

Answer: B

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135. Which of the following oxoacids of halogen doesn't exist

A. HOBrO

B. HOF

C. $HOBrO_2$

D. $HOIO_3$

Answer: A

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136. In vapour state, sulphur (S_2) shows paramagnetic behaviour due to

A. Presence of one unpaired electron in the antibonding σ^* orbitals

B. Presence of two unpaired electrons in the bonding pi orbitals

C. Presence of one unpaired electrons in the bonding π^* orbitals

D. Presence of two unpaired electrons in the bonding π^* orbitals

Answer: D

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137. Which of the following given applications of O_3 gas is not correct?

A. It is used as a germicide, disinfectent and for sterilising water

B. It is used as a bleaching agent for oils, ivory and delicate fabrics

C. It is used as an oxidising agent in the manufacture of potassium permanganate

D. It is used in oxyacetylene and oxyhydrogen flames

Answer: D

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138. The shape of BrF_3 molecule is slightly bent T , because

A. The lone pairs occupy the equatorial position to minimize lone pair- lone pair and the bond pair-lone pair repulsions

B. The axial fluroine atoms will be bent towards the equatorial fluorine in orer to minimize the lone pair-lonepair repulsions.

C. According to the VSEPR theory, one lone pair of Br occupies the equatorial position and the second one occupied the axial position in order to minimize the lone pair-lone pair repulsion

D. Both (1) and (2)

Answer: D

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139. Which of the following order is incorrect?

A. $HF > HCL > HBr > HI$ - Acidic strength

B. $Cl > F > Br > I$ - Electron affinity

C. $Cl_2 > Br_2 > F_2 > I_2$ - Bond dissociation energy

D. $F_2 > CL_2 > Br_2 > I_2$ - Oxidising power

Answer: A

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140. Identify the incorrect statement with respect to ozone.

A. It is formed when dry stream of O_2 is passed through a silent electrical discharge

B. It acts as a powrful oxidizing agent

C. It's decomposition into oxygen reults in an increase in entropy

D. Ozone protects the earth's inhabitants by absorbing (gamma) radiations

Answer: D

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141. The incorrect statement for rhombic sulphur is

A. It is insoluble in water

B. It exist as S_8 molecules, which is puckered crown ring structure

C. It is white in colour

D. Its melting point is lower than monoclinic sulphur

Answer: C

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142. Which of the following outer electronic configuration represents Argon?

A. $2s^2 2p^6$

B. $3s^2 3p^4$

C. $3s^2 3p^6$

D. $3s^2 3p^5$

Answer: C

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143. Noble gases do not react with other elements because

A. The size of their aoms are very small

B. They are not found in abundance

C. They are monoatomic

D. They have vert stable electronic configuration

Answer: D

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144. Which one of the following reaction of Xenon compounds is not feasible?

A. $XeF_6 + H_2O \rightarrow XeO_4 + HF$

B.

C.

D.

Answer: A

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145. In which of the following compounds central atom has same number of lone pairs of electrons?

(a) XeF_2

(b) XeF_4

(c) XeO_3

(d) $XeOF_4$

A. (a) & (b)

B. (a), (c) & (d)

C. (c) & (d)

D. (b) & (c)

Answer: C

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146. The one of the rarest element of group 18 is

A. He

B. Ar

C. Ne

D. Xe

Answer: D

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147. The correct order of boiling point for the given elements is

A. $He > Ne > Xe > Ar > Kr$

B. $Xe > Kr > Ar > Ne > He$

C. $He > Ne > Ar > Kr > Xe$

D. $Xe > Ar > Kr > Ne > He$

Answer: B

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148. The complete hydrolysis of which of the following compounds of Xe is a redox reaction?

A. XeF_2

B. XeF_4

C. XeF_6

D. Both (1) and (2)

Answer: D

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149. The least positive electron gain enthalpy is for

A. He

B. Ne

C. Ar

D. Xe

Answer: A

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150. The coordination number of a metal in coordination compound is

A. Same as primary valency

B. Sum of primary and secondary valencies

C. Same as secondary valency

D. Twice the primary valency

Answer: C

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151. Which of the following complexes has six coordination number?

A. $\left[Zn(CN)_4\right]^{2-}$

B. $\left[Co(en)_2Cl_2\right]^{+}$

C. $\left[Ag(NH_3)_2\right]^{+}$

D. $\left[Ni(NH_3)_4\right]^{2+}$

Answer: B

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152. Which of the following ligands forms chelate with metal ion?

A. Acetate

B. Oxalate

C. Cyanide

D. Ammonia

Answer: B

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153. An example of ambidentate ligand is

A. H_2O

B. NO_2^-

C. $NH_2CH_2CH_2NH_2$

D. NH_3

Answer: B

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154. When two moles of $\left[Co(NH_3)_5Cl\right]Cl_2$ is treated with excess silver nitrate solution, the number of moles of silver chloride formed is

A. 3

B. 6

C. 4

D. 2

Answer: C

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155. In solution, the complex, $\left[Pt(NH_3)_6\right]Cl_4$ gives

A. 4 ions

B. 3 ions

C. 2 ions

D. 5 ions

Answer: D

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156. As per IUPAC nomenclature, the name of the complex, $\left[Co(H_2O)_4(NH_3)_2\right]Cl_3$ is

A. Tetraaquadiaminecobalt (III) chloride

B. Tetraaquadiamminecobalt (III) chloride

C. Diaminetetraaquacobalt (III) chloride

D. Diamminetetraaquacobalt (III) chloride

Answer: D

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157. The IUPAC name of $\left[Ni(NH_3)_4\right]\left[NiCl_4\right]$ is

A. Tetrachloridonickel (II) tetraamminenickel (II)

B. tetraamminenickel (II) Tetrachloridonickel (II)

C. tetraamminenickel (II) Tetrachloridonickelate (II)

D. tetraamminenickel (Iv) Tetrachloridonickelate (Iv)

Answer: C

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158. The ionization isomer of $\left[Cr(H_2O)_4Cl(NO_2)\right]Cl$ is

A. $\left[Cr(H_2O)_4(NO_2)\right]Cl_2$

B. $\left[Cr(H_2O)_4Cl_2\right]NO_2$

C. $\left[Cr(H_2O)_4Cl(ONO)\right]Cl$

D. $\left[Cr(H_2O)_3Cl_2(NO_2)\right]H_2O$

Answer: B

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159. The primary valence of the metal ion in the coordination compound $K_2\left[Ni(CN)_4\right]$ is

A. Four

B. Zero

C. Two

D. Six

Answer: C

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160. Which among the following is a polydentate ligand?

A. Oxalate

B. Ethane-1, 2-diamine

C. $EDTA^{4-}$

D. SCN^{-}

Answer: C

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161. Which one of the following will give a white precipitate with $AgNO_3$ in aqueous medium

A. $\left[Co(NH_3)_5Cl\right](NO_2)_2$

B. $\left[Pt(NH_3)_2Cl_2\right]$

C. $[Pt(en)Cl_2]$

D. $\left[Pt(NH_3)_4\right]Cl_2$

Answer: D

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162. Which kind of isomerism is exhibited by octahedral $\left[Co(NH_3)_4Br_2\right]CI$? .

A. Geometrical and inoization

B. Geometrical and optical

C. Optical and ionization

D. Only geometrical

Answer: A

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163. The optically active co-ordination complex ion among the following is

A. $Trans - \left[Co(en)_2Cl_2\right]^+$

B. $Cis - \left[Co(en)(NH_3)_2Cl_2\right]^+$

C. $\left[Co(NH_3)_6\right]^{3+}$

D. $\left[Co(NH_3)_4Cl_2\right]^+$

Answer: B

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164. The number of possible isomers of a square planar complex, [mabcd] is/are

A. 4

B. 3

C. 2

D. 1

Answer: B

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165. The complex ion having minimum magnitude of $\triangle_o$ (CFSE) in octahedral field is

A. $[CoCl_6]^{3-}$

B. $[Co(CN)_6]^{3-}$

C. $[Co(H_2O)_6]^{3+}$

D. $[Co(NH_3)_6]^{3+}$

Answer: A

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166. The number of unpaired electrons in central metal of cobalt ferrocyanide, $Co_2\left[Fe(CN)_6\right]$ is

A. 0

B. 2

C. 1

D. 3

Answer: A

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167. Geometrical shapes of the complexes formed by the reaction of Ni^{2+} with Cl^- , and CN^- , respectively are

A. Octahedral, tetrahegral and square planar

B. Tetrahegral, Octahedral and square planar

C. Square planar, tetrahegral and octahedral

D. Octahedral, square planar and tetrahegral

Answer: B

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168. The compound which does not show paramagnetism is

A. $\left[Cu(NH_3)_4\right]Cl_2$

B. $\left[Ag(NH_3)_2\right]Cl$

C. $[NiCl_4]^{2-}$

D. $[CoF_6]^{3-}$

Answer: B

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169. The shape of $[Cu(NH_3)_4]^{2+} is \square planar$, Cu^(2+)` in this complex is

A. sp^3 hybridised

B. dsp^2 hybridised

C. sp^3d hybridised

D. sp^3d^2 hybridised

Answer: B

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170. What is the geometrical shape of complex and hybridisation of central metal in $\left[Fe(CO)_5\right]$?

A. Tetrahedral, sp^3

B. Square planar, dsp^2

C. Trigonal bipyramidal, dsp^3

D. Trigonal bipyramidal, sp^3d

Answer: C

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171. Out of the following, choose a correct statement.

A. [Cu(NH_3)_6]^(2+)` is a colourless ion

B. [Zn(H_2O)_6]^(2+) ` ion is blue coloured

C. [Ni(CO)_4] ` ion has a square planar shape

D. If $\left[CoCl(NH_3)_5\right]^{2+}$ absorbs yellow colour of light, then the colour of this coordination entity is violet.

Answer: D

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172. The magnetic moment of a transition metal of 3d series is $\sqrt{48}$ B.M. It`s electronic configuration is

A. $3d^1 4s^2$

B. $3d^6 4s^1$

C. $3d^6 4s^2$

D. $3d^5 4s^2$

Answer: B

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173. Crystal field stabilization energy for high spin d^4 octahedral complex is

A. $-0.6\ \triangle_{\circ}$

B. $-1.8\ \triangle_{\circ}$

C. -1.6 triangle_circ + p`

D. $-1.2\ \triangle_{\circ}$

Answer: A

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174. High spin complex of d^6 configuration in an octahedral field will have the CFSE equal to

A. $\frac{-12}{5}\ \triangle_{\circ}$

B. $\frac{-14}{5}\ \triangle_{\circ}$

C. $\frac{-41}{5}$ △。

D. $\frac{-2}{5}$ △。

Answer: D

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175. The hybridized state of Al^{3+} in the complex ion formed when $AlCl_3$ is treated with aqueous acid is

A. sp^3

B. dsp^2

C. sp^3d^2

D. sp^2d

Answer: C

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176. Which of the following complexes is an inner orbtial complex ?

A. $[FeF_6]^{3-}$

B. $[NiCl_4]^{2-}$

C. $[Ni(H_2O)_6]^{2+}$

D. $[Mn(CN)_6]^{3-}$

Answer: D

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177. Which of the following pairs does not exhibit colour in solution ?

A. $ZnCl_2, HgCl_2$

B. $CuCl_2, VOCl_2$

C. $VOCl_2, FeCl_2$

D. $MnCl_2, FeCl_3$

Answer: A

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178. Which of the following complexes will show jahn-Teller distortion?

A. $\left[Cu(H_2O)_6\right]^{2+}$

B. $\left[Cr(H_2O)_6\right]^{3+}$

C. $\left[Mn(H_2O)_6\right]^{2+}$

D. $\left[Co(H_2O)_6\right]^{3+}$

Answer: A

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179. Out of the following, choose a correct expression for finding out the cystal field stabilization energy in

tetrahedral coordination entities.

A. (## AAK_MCP_27_NEET_CHE_E27_030_A001 .png"
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B. (## AAK_MCP_27_NEET_CHE_E27_030_A002 .png"
width="30%">

C. (## AAK_MCP_27_NEET_CHE_E27_030_A003 .png"
width="30%">

D. (## AAK_MCP_27_NEET_CHE_E27_030_A004 .png"
width="30%">

Answer: C

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180. The homoleptic complex is

A. $\left[Co(NH_3)_4Cl_2\right]^+$

B. $\left[Co(NH_3)_6\right]^{3+}$

C. $\left[Ni(NH_3)_4Cl_2\right]$

D. $\left[Fe(NH_3)_4Cl_2\right]^+$

Answer: B

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181. Which of the following is not a metal carbonyl?

A. $Ni(CO)_4$

B. $[Co(CN)_6]^{3-}$

C. $Mn_2(CO)_{10}$

D. $Fe(CO)_5$

Answer: B

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182. In which of the following carbonyls, the bond length of CO is the highest ?

A. $[V(CO)_6]^-$

B. $[Cr(CO)_6]$

C. $[Mn(CO)_6]^+$

D. $\left[Fe(CO)_4\right]^{2-}$

Answer: D

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183. The number of bridging CO groups in $\left[Co_2(CO)_8\right]$ and $\left[Fe(CO)_5\right]$ are respectively

A. 2, 0

B. 1, 1

C. 1, 0

D. 2, 1

Answer: A

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184. The addition of four amine groups to a metal ion $\left(X^{2+}\right)$ shows a stability constants of $2 \cdot 10^4$, $1.5 \cdot 10^3$, $1.2 \cdot 10^2$ and $1.4 \cdot 10^1$ respectively. Then, the overall complex dissociation equlolibrium constant for $\left[X(NH_3)_4\right]^{2+}$ ion is

A. 5.04 * 10^(-10)`

B. 19.8 * 10^(-10)`

C. 1.98 * 10^(-11)`

D. 50.4 * 10^(-9)`

Answer: C

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185. Excess of copper and iron are removed mainly by which of the following chelating ligands via formation of coordination compounds?

A. Desferrioxime-B and EDTA respectively

B. EDTA and D-penicillamine respectively

C. Desferrioxime-B and D-penicillamine respectively

D. D-penicillamine and Desferrioxime B-respectively

Answer: D

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186. Ethylidene chloride is a/an

A. Gem-dihalide

B. Allylic halide

C. Vinylic halide

D. Vic-dihalide

Answer: A

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187. Which of the following will not lead to the formation of an alkyl halide?

A. 

B. 

C. 

D. 

Answer: D

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188. F_3C-CH=CH_2 overset(HBr)(rarr) (A) overset(Nal) underset(dry acetone)(rarr) (B) `

A. F_3C-CH(Br)-CH_3 and F_3C-CH(I)-CH_3`

B. F_3C-CH_2-CH_2Br and F_3C-CH_2-CH_2 I`

C. $BrF_2C-CH=CH_2$ and $IF_2C-CH=CH_2$

D.

$BrF_2C - CH_2 - CH_2Br$ and $IF_2C - CH_2 - CH_2I$

Answer: B

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189. In the reaction $C_2H_5OH + HX \xrightarrow{Zncl_2} C_2H_5X + H_2O$. The order of reactivity of HX is

A. Hl gt HBr gt HCl

B. HCl gt HBr gt Hl

C. HCl gt Hl gt HBr

D. HBr gt Hl gt HCl

Answer: A

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190. CH_3-C-= CH + Br_2 overset (Ccl_4)(rarr)(A)` The product (A) is

A. (## AAK_MCP_27_NEET_CHE_E27_043_A001 .png" width="30%">

B. (## AAK_MCP_27_NEET_CHE_E27_043_A002 .png" width="30%">

C. (## AAK_MCP_27_NEET_CHE_E27_043_A003 .png"

width="30%">

D. $CH_3 - CH_2 - CHBr_2$

Answer: B

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191. Among the following halide ions $\left(X^-\right)$ reaction, which is feasible is?

A.

$$x^- + CH_3 - CH_2 - H \rightarrow CH_3 - CH_2 - X + H^-$$

B. (## AAK_MCP_27_NEET_CHE_E27_044_A002 .png"

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C. $x^- + CH_3 - CH_3 \rightarrow CH_3 - X + \overline{C}H_3$

D. $x^- + CH_3 - OH \rightarrow CH_3 - X + \overline{O}H$

Answer: B

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192. The numberof all possible products excluding stereoisomers obtained on monochlorination of n-butane and iso-butane are respectively

A. 2 and 3

B. 3 and 2

C. 2 and 1

D. 2 and 2

Answer: D

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193. An example of non - benzenoid compound is

A. 

B. 

C. 

D. 

Answer: C

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194. Which among the following represents sec-butyi group?

A. 

B. 

C. 

D. 

Answer: D

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195. Which among the following compounds contains quaternary carbon?

A. 

B. 

C. 

D. 

Answer: B

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196. General formula of alkyl group is

A. c_nH_{2n}

B. c_nH_{2n+2}

C. c_nH_{2n+1}

D. c_nH_{2n-1}

Answer: C

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197. Number of sp Hybridised carbon in the given structure is

$$CH_3CH_2CH=C=C=C=CH-C\equiv CH$$

A. 7

B. 5

C. 4

D. 6

Answer: B

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198. The structure of organic compound having IUPAC nomenclature, 2,8-Dimethyl-5-(2-methylpropyl)nonane

A. (## AAK_MCP_28_NEET_CHE_E28_009_A001 ##) `

B. (## AAK_MCP_28_NEET_CHE_E28_009_A002 ##) `

C. (## AAK_MCP_28_NEET_CHE_E28_009_A003 ##) `

D. (## AAK_MCP_28_NEET_CHE_E28_009_A004 ##) `

Answer: D

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199. Which of the following is not planar in structure?

A. $CH_2 = CH - CH = CH_2$

B. $CH_2 = CH - CN$

C. $CH_2 = C = CH_2$

D. $CH_2 = C = C = CH_2$

Answer: C

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200. Trivial name of $C_6H_5NH_2$ IS

A. CYCLOHEXYLAMINE

B. Phenylamine

C. Benzylamine

D. Aniline

Answer: D

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201. Which among the following is an alicyclic compound?

A. 

B. 

C. 

Answer: C

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202. The correct three dimensional presentation of ethane is

A. 

B. 

C. 

D. 

Answer: A

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203. how many structural isomers are possible for C_6H_{14} ?

A. 4

B. 5

C. 6

D. 7

Answer: B

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204. which molecule will be exhibit keto-enol tautomerism ?

A. 

B. 

C. 

D. 

Answer: D

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205. which alkene will not show geometrical isomerism ?

A. $XYC = CXY$

B. $XYC = CXZ$

C. $XYC = CZW$

D. $XYC = CXX$

Answer: D

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206. the enol form of $hept - 5 - en - 2 -$ one contains

A. 17sigma-bonds and 2π-bonds

B. 19sigma-bonds and 2π-bonds

C. 15sigma-bonds and 1π-bond

D. 21sigma-bonds and 2π-bonds

Answer: B

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207. which of the following is not an isomer of pentanal

A. 2-pentanone

B. 3-pentanone

C. 3-Methylbutanone

D. 3-Methyl-2-butanol

Answer: D

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208. nitromethane will exhibit which type of isomerism?

A. metamerism

B. geometrical isomerism

C. tautomerism

D. optical isomerism

Answer: C

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209. enol content will be maximum in which of given compound?

A. CH_3CHO

B. 

C. 

D. 

Answer: C

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210. total number of isomeric alcohols (excluding stereoisomerism) with formula $C_5H_{12}O$ is

A. 5

B. 6

C. 7

D. 8

Answer: D

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211. which of the following compound will show stereo isomerism?

A. 3-Pentarol

B. 3-Pentanone

C. But-2-ene

D. Propane

Answer: C

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212. structure of compound having IUPAC nomenclature, 2-chloro-4-methylaniline is

A. 

B. 

C. 

D. 

Answer: C

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213. which among the following is a Z alkene ?

A. 

B. 

C. 

D. 

Answer: C

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