CHEMISTRY

BOOKS - NEET PREVIOUS YEAR (YEARWISE + CHAPTERWISE)

P-BLOCK ELEMENTS

Exercise

1. The species, having bonds angle of 120° is

A. PH_3

B. ClF_3

C. NCl_3

D. BCl_3

Answer: D

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2. Match the interhalogen compounds of column I with the geometry in column II and

assign the correct code

Column I	Column II
(a) XX'	(i) T-shape
(b) XX'_3	(ii) Pentagonal bipyramidal
(c) XX'_5	(iii) Linear
(d) XX'_7	(iv) Square-pyramidal
	(v) Tetrahedral

A.

A	B	C	D
(iii)	(iv)	(i)	(ii)

B.

A	B	C	D
(iii)	(i)	(iv)	(ii)

C.

A	B	C	D
(v)	(iv)	(iii)	(ii)

D.

A	B	C	D
(iv)	(iii)	(ii)	(i)

Answer: B

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3. Which of the following pairs of compound is isoelectronic and isostructure ?

A. $BeCl_2, XeF_2$

B. Tel_2, XeF_2

C. Ibr_2^-, XeF_2

D. IF_3, XeF_2

Answer: C

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4. It is because of inability of ns^2 electrons of the valence shell to participate in bonding that:

A. Sn^{2+} os reducing while Pb^{4+} is oxidising

B. Sn^{2+} os oxidising while Pb^{4+} is reducing

C. Sn^{2+} and Pb^{+} are both oxidising and reducing

D. Sn^{4+} is reducing while Pb^{4+} is oxidising

Answer: D

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5. In which pair of ions both the species contains $S-S$ bond?

A. $S_2O_7^{2-}, S_2O_3^{2-}$

B. $S_4O_6^{2-}, S_2O_3^{2-}$

C. $S_2O_7^{2-}, S_2O_8^{2-}$

D. $S_4O_6^{2-}, S_2O_7^{2-}$

Answer: B

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6. Match the compounds given in Column I with the hybridisation and shape given in column II and mark the correct option.

	Column I		Column II
A.	XeF_6	1.	Distorted octahedral
B.	XeO_3	2.	Square planar
C.	$XeOF_4$	3.	Pyramidal
D.	XeF_4	4.	Square pyramidal

A.

A	B	C	D
1	2	4	3

B.

A	B	C	D
4	3	1	2

C.

A	B	C	D
4	1	2	3

D.

A	B	C	D
1	3	4	2

Answer: D

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7. Which of the following statement is correct for the given acids?

A. Phosphinic acid is a monoprotic acid while phosphonic acid is a diprotic acid

B. Phosphinic acid is a diprotic acid while phosphonic acid is a monoprotic acid

C. Both are triprotic acids

D. Both are diprotic acids

Answer: A

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8. Among the following, the correct order of acidity is:

A. $HClO < HClO_2 < HClO_3 < HClO_4$

B. $HClO_2 < HClO < HClO_3 < HClO_4$

C. $HClO_4 < HClO_2 < HClO < HClO_3$

D. $HClO_3 < HClO_4 < HClO_2 < HClO$

Answer: A

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9. Which one of the following orders is correct for the bond dissociation enthalpy of halogen molecules?

A. $Cl_2 > Br_2 > F_2 \geq I_2$

B. $Br_2 > I_2 > F_2 > Cl_2$

C. $F_2 > Cl_2 > Br_2 > I_2$

D. $I_2 > Br_2 > Cl_2 > F_2$

Answer: A

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10. Boric acid is an acid because its molecule

A. contains replaceable H^+ ion

B. gives up a proton

C. accepts OH^- from water releasing proton

D. combines with proton from water molecule.

Answer: C

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11. AIF_3 is soluble in HF only in presence of KF. It is due to the formation of

A. $K_3[AlF_3H_3]$

B. $K_3[AlF_6]$

C. AlH_3

D. $K[AlF_3H]$

Answer: B

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12. Hot concentrated sulpuric acis is a moderatly strong oxidizing agent. Which of the following reaction does not shwo oxidizing behaviour?

A. $Cu + 2H_2SO_4 \rightarrow CuSO + SO_2 + 2H_2O$

B. $3S + 2H_2SO_4 \rightarrow 3SO_2 + 2H_2O$

C. $C + 2H_2SO_4 \rightarrow CO_2 + 2SO_2 + 2H_2O$

D. $CaF_2 + H_2SO_4 \rightarrow CaSO_4) + 2HF$

Answer: D

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13. The correct geometry and hybridisation for XeF_4 are

A. octahedral, sp^3d^2

B. trigonal bipyramidal, sp^3d

C. planar triangle, sp^3d^3

D. square planar, sp^3d^2

Answer: A

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14. Among the following ,which one is the wrong statement

A. PH_5 and $BiCl_5$ do not exist

B. $p\pi - d\pi$ bonds are present in SO_2

C. SeF_4 and CH_4 have same shape

D. I_3^+ has bent geometry

Answer: C

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15. Nitrogen dioxide and sulphur dioxide have some properties in common, which property is shown by one of these compounds, but not by the other?

A. Forms' acid-rain

B. is a soluble in water

C. is used as a food-preservation.

D.

Answer: A

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16. Maximum bond angle at nitrogen is present in which of the following ?

A. NO_2

B. NO_2^-

C. NO_2^+

D. NO_3^-

Answer: C

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17. In which of the following pairs, both the species are not isostructural?

A. $SiCl_4, PCl_4^+$

B. Diamond, carbide

C. NH_3, PH_3

D. XeF_4, XeO_4

Answer: D

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18. Decreasing order of stability of O_2, O_2^-, O_2^+ and O_2^{2-} is

A. $O_2^+ > O_2 > O_2^- > O_2^{2-}$

B. $O_2^{2-} > O_2^- > O_2 > O_2^-$

C. $O_2 > O_2^+ > O_2^{2-} > O_2^-$

D. $O_2^- > O_2^{2-} > O_2^+ > O_2$

Answer: A

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19. The stability of $+1$ oxidation state increases in the sequence :

A. $Ga < In < Al < Tl$

B. $Al < Ga < In < Tl$

C. $Tl > In < Ga < Al$

D. $\ln < Tl < Ga < Al$

Answer: A

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20. Which of the statements given below is incorrect ?

A. Cl_2O_7 is an anhydride of perchloric acid

B. O_3 molecule is bent

C. ONF is isoelectronic with NO_2

D. OF_2 is an oxide of florine

Answer: D

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21. The formation of oxide ion $O^{2-}(g)$ from oxygen atom requires first an exothermic and then an endothermic step as shown below

$$O(g) + e^- \rightarrow O^-(g), \Delta H^- = -141 kjmol^{-1}$$

$O^-(g) + e^- \rightarrow O^{2-}(g), \Delta H^- = +780 kjmol^{-1}$

Thus, process of formation of O^{2-} in gas phase is unfavourable even through O^{2-} is isoelectronic with neon. It is due to the fact that A) oxygen is more electronegative B) addition of electron in oxygen results in larget size of the ion C) electron repulsion outweights the stability gained by achieving noble gas configuration D) O^- ion has comparatively smaller size than oxygen atom

A. electron repulsion outweighs the stability gained by achieving noble gas

configuration

B. O^- ion has compartively smaller size than oxygen atom

C. Oxygen is more electronegative

D. additon of electron in oxygen result in larger size of the ion

Answer: A

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22. The variation of the boiling points of the hydrogen halides is in the order $HF > HI > HBr > HCl$.

What explains the higher boiling point of hydrogen fluoride?

A. The electronegativity of fluorine is much higher than for other elements in the group

B. There is strong hydrogen bonding between HF molecules

C. The bond energy of HF molecules is greater than in other hydrogen halides

D. The effet of nuclear shielding is much reduced in florine which polarises the HF molecule

Answer: B

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23. Strong reducing behaviour of H_3PO_2 is due to

A. presence of one-OH group and two P-H bonds

B. high electron gain enthalpy of phosphorus

C. high oxidation state of phosphorus

D. presence of two -OH groups and one P-H bond

Answer: A

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24. Acidity of diprotic acids in aqueous solutions increases in the order

A. $H_2S < H_2Se < H_2Te$

B. $H_2Se < H_2S < H_2Te$

C. $H_2Te < H_2S < H_2Se$

D. $H_2Se < H_2Te < H_2S$

Answer: A

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25. Which of the following structure is similar to graphite e?

A. BN

B. B

C. B_4C

D. B_2H_6

Answer: A

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26. The basic structural unit of silicates is

A. SiO^{-}

B. SiO_4^{4-}

C. SiO_3^{2-}

D. SiO_4^{2-}

Answer: B

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27. XeF_2 is isostructural with

A. TeF_2

B. lCl_2^-

C. $SbCl_3$

D. $BaCl_2$

Answer: B

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28. Which of these is not a monomer for a high-molecular mass silicone polymer?

A. $MeSiCl_3$

B. Me_2SiCl_2

C. Me_3SiCl

D. $PhSiCl_3$

Answer: C

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29. When Cl_2 gas reacts with hot and concentrated sodium hydroxide solution, the oxidation number of chlorine changes from

A. zero to +1 and zero to -5

B. zero to -1 and zero to +5

C. zero to -1 and zero to +3

D. zero to +1 and zero to -3

Answer: B

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30. Which of the following statement is not valid for oxoaids of phosphorus?

A. Orthophosphoric acid is used in the manufacture of triple superphosphate

B. Hypophousphorus acid is a diprotic acid

C. All oxoacids contain tetrahedral four coordinated phosphorus

D. All oxoacids contain at least one $P = O$ unit and one $P - OH$ group.

Answer: B

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31. Sulphur trioxide can be obtained by which of the following reactions:

A. $CaSO_4 + C \xrightarrow{\Delta}$

B. $Fe_2(SO_4)_3 \xrightarrow{\Delta}$

C. $S + H_2SO_4 \xrightarrow{\Delta}$

D. $H_2SO_4 + PCl_5 \xrightarrow{\Delta}$

Answer: B

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32. Name the type of the structure of silicate in which one oxygen atom of $[SiO_4]^{4-}$ is shared

A. Sheet silicate

B. Pyrosilicate

C. Three dimensional silicate

D. Linear chain silicate

Answer: B

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33. Oxidation states of P in $H_4P_2O_5$, $H_4P_2O_6$ and $H_4P_{2\square}O_7$, respectively are

A. $+3,\ +5$ and +4

B. $+5,\ +3$ and +4

C. $+5,\ +4$ and +3

D. $+3,\ +4$ and $+5$

Answer: D

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34. Which one of the following molecules hydrides acts as a Lewis acid ?

A. NH_3

B. H_2O

C. B_2H_6

D. CH_4

Answer: C

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35. The tendency of bF_3, BCl_3 and BBr_3 behave as Lewis acid decreases in the sequnece

A. $BCl_3 > BF_3 > BBr_3$

B. $BBr_3 > BCl_3 > BF_3$

C. $BBr_3 > BF_3 > BCl_3$

D. $BF_3 > BCl_3 > BBr_3$

Answer: B

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36. The stability of $+1$ oxidation state increases in the sequence :

A. $Al < Ga < \ln < Tl$

B. $Tl < \ln < Ga < Al$

C. $\ln < Tl < Ga < Al$

D. $Ga < \ln < Al < Tl$

Answer: A

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37. The straight chain polymer is formed by

A. hydrolysis of $(CH_3)_3SiCl$ followed by condensation polymerisation

B. hydrolysis of $(CH_3)_4$ Si by addition polymerisation

C. hydrolysis of $(CH_3)_4SiCl_2$ by addition polymerisation

D. hydrolysis of $(CH_3)_2SiCl_2$ following by condensation polymerisation.

Answer: D

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38. Among the following which is the strongest oxidising agent?

A. F_2

B. Br_2

C. I_2

D. Cl_2

Answer: C

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39. Which one of the following arrangements does not give the correct picture of the trends indicated against it ?

A. $F_2 > Cl_2 > Br_2 > I_2$ Oxidising power

B. $F_2, Cl_2 > Br_2 > I_2$ Electron gain enthaply

C. $F_2 > Cl_2 > Br_2 > I_2$

D. $F_2 > Cl_2 > Br_2 > I_2$ Electronegtivity

Answer: C

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40. Which of the following anions is present in the chain structure of silicates?

A. $Si_2O_7^{6-}$

B. $\left(Si_2O_5^{2-}\right)_n$

C. $\left(SiO_3^{2-}\right)_n$

D. SiO_4^{4-}

Answer: C

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41. Which one of the following ionic species has the greatest proton affinity to form stable compound ?

A. HS^-

B. NH_2^-

C. F^-

D. I^-

Answer: C

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42. Which of the following oxidation states are the most characteristics for lead and tin, respectively?

A. $+4, \ +2$

B. $+2, \ +4$

C. $+4, \ +4$

D. $+2, \ +2$

Answer: B

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43. Which of the following is the most basic oxide ?

A. Al_2O_3

B. Sb_2O_3

C. Bi_2O_3

D. SeO_2

Answer: C

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44. Al_2O_3 can be converted to anhydrous $AlCl_3$ by heating

A. Al_2O_3 with HCl gas

B. Al_2O_3 with $NaCl$ in solid state

C. a mixture of Al_2O_3 and carbon in dry Cl_2 gas

D. Al_2O_3 with Cl_2 gas

Answer: C

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45. Which one of the following orders is not in according with the property stated against it ?

A. $F_2 > Cl_2 > Br_2 > I_2$ Oxidising power

B. $Hl > HBr > HCl > HF$ acidic property in water

C. $F_2 > Cl_2 > Br_2 > I_2$ Electronegativity

D. $F_2 > Cl_2 > Br_2 > I_2$ Bond dissociation energy

Answer: D

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46. Which of the following is the electron-deficient molecule?

A. B_2H_6

B. C_2H_6

C. PH_3

D. SiH_4

Answer: A

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47. Which one of the following arrangements represents the correct order of electron gain enthalpy of the given atomic species?

A. $Cl < F < S < O$

B. $O < S < F < Cl$

C. $S < O < Cl < F$

D. $F < Cl < O < S$

Answer: B

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48. Which one of the following oxides is expected to exhibit paramagnetic behaviour?

A. CO_2

B. SO_2

C. ClO_2

D. SiO_2

Answer: C

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49. Among K, Ca, Fe and Zn the element which can form more than one binary compound with chlorine is

A. Fe

B. Zn

C. K

D. Ca

Answer: A

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50. Which is the best decription of behaviour of bromine in the reaction given below ?

$H_2O + Br_2HBR + HOBr$

A. Only oxidised

B. Only reduced

C. Both oxidised and reduced

D. Only proton accepted

Answer: C

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51. Which of the following statements about the zeolites is false?

A. They are used as cation exchangers

B. They have open structure which enables them to take up small molecules

C. Zeolites are aluminosilicates having three dimensional network

D. Some of the SiO_4^{4-} units are replaced by AlO_4^{5-} and AlO_6^{9-} ions in zeolites

Answer: D

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52. Which one of the following compounds is not a protoric acid?

A. $SO(OH)_2$

B. $SO_2(OH)_2$

C. $B(OH)_2$

D. $PO(OH)_3$

Answer: C

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53. Which of the following statements is not true ?

A. HOCl is a stronger acid than $HOBr$

B. HF is a stronger acid than HCl

C. Among halide ions, iodine is the most powerful reducing agent.

D. Fluorine is the only halogen that does not show a variable oxidation state

Answer: B

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54. The oxidation states of sulphur in the anions SO_3^{2-}, $S_2O_4^{2-}$, and $S_2O_6^{2-}$ follow the order

A. $S_2O_4^{2-} < S_2O_6^{2-} < SO_3^{2-}$

B. $S_2O_6^{2-} < S_2O_4^{2-} < SO_3^{2-}$

C. $S_2O_4^{2-} < SO_3^{2-} < S_2O_6^{2-}$

D. $SO_3^{2-} < S_2O_4^{2-} < S_2O_6^{2-}$

Answer: C

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55. Zn gives H_2 gas with H_2SO_4 and HCl but not with HNO_3 because

A. Zn act as oxidising agent when react with HNO_3

B. HNO_3 is weaker acid than H_2SO_4 and HCl

C. In electrochemical series Zn is placed above hydrogen

D. NO_3^- is reduced in preference to hydronium ion

Answer: D

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56. In borax bead test, which compound is formed?

A. Ortho borate

B. Meta borate

C. Double oxide

D. Tetra borate

Answer: B

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57. Which of the following statements is true ?

A. Silican exhibits 4 coordination number in its compounds

B. Bond energy of F_2 is less than Cl_2

C. $Mn(III)$ oxidation state is more stable than $Mn(II)$ in aqueous state

D. Elements of 15th group shows only +3 and +5 oxidation states

Answer: B

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58. Which of the following reaction is not feasible?

A. $2Kl + Br_2 \rightarrow 3KBr + I_2$

B. $2KBr + I_2 \rightarrow 2Kl + Br_2$

C. $2KBr + Cl_2 \rightarrow 2KCl + Br_2$

D. $2H_2O + 2F_2 \rightarrow 4HF + O_2$

Answer: B

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59. Nitrogen forms N_2 but phosphorous when forms P_2 gets readily converted into P_4 because

A. triple bond present between phosphorus atom

B. $p\pi - p\pi$ bonding is weak

C. $p\pi - p\pi$ bonding is strong

D. multiple bond form easily

Answer: B

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60. Among the following the electron deficient compound is

A. BCl_3

B. CCl_4

C. PCl_5

D. $BeCl_2$

Answer: A

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61. Which one of the following arrangement does not truly represent the property indicated against it ?

A. $Br_2 < Cl_2 < F_2$ Oxidising power

B. $Br_2 < Cl_2 < F_2$ Electronegativity

C. $Br_2 < F_2 < Cl_2$ Electron affinity

D. $Br_2 < Cl_2 < F_2$ Bond energy

Answer: D

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62. Which of the following is used in the prepration of chlorine ?

A. Only MnO_2

B. Only $KMnO_4$

C. Both MnO_2 and $KMnO_4$

D. Either MnO_2 and $KMnO_4$

Answer: C

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63. Which of the following phosphorus is the most reactive?

A. Red phosphorus

B. White phosphorus

C. Scariet phosphorus

D. Violet phosphorus

Answer: B

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64. Percentage of lead in lead pencil is

A. zero

B. 20

C. 80

D. 70

Answer: A

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65. Which of the following does not show electrical conductance?

A. Potassium

B. Graphite

C. Dimond

D. Sodium

Answer: C

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66. Which of the following is most acidic ?

A. N_2O_5

B. P_2O_5

C. As_2O_5

D. Sb_2O_5

Answer: A

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67. Which one of the elements has the maximum electron affinity?

A. Cl

B. Br

C. I

D. F

Answer: A

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68. A one litre flask is full of brown bromine vapour. The intensity of brown colour of vapour will not decreases appreciably on adding to the flask some

A. pieces of marble

B. animal charcoal powder

C. carbon tetrachloride

D. carbon disulphide

Answer: A

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69. Repeated use of which one of the following fertilizers would increase the acidity of the soil?

A. Urea

B. Superphosphate of lime

C. Ammonium sulphate

D. Potassium nitrate

Answer: C

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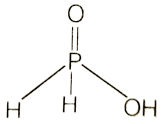
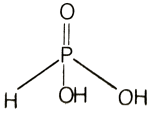
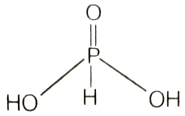
70. the correct structural formula of hypophosphorous acid is

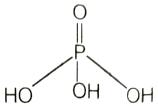
A. (a)



B. (b)



C. (c) 

D. (d) 

Answer: A

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71. Which of the following statement is /are correct regarding F^- and CI^-

(i) Cl^- can give up an electron more easily than F^-

(ii) Cl^- is smaller in size than F^-

(iii) Cl^- is a better reducing agent then F^-

(iv) F^- can be oxidized more readily than Cl^-

A. I and II

B. I. II and IV

C. III and IV

D. Only I

Answer: D

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72. Oxidation of thiosulphate by iodine gives

A. tetrathionate ion

B. sulphide ion

C. sulphate ion

D. sulphate ion

Answer: A

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73. Which of the following oxides will be the least acidic?

A. As_4O_6

B. As_4O_{10}

C. P_4O_{10}

D. P_4O_6

Answer: A

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74. Which of the followign compounds has a 3-centre bond ?

A. Diborane

B. CO_2

C. Boron trifluoride

D. Ammonia

Answer: A

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75. The structure and hybridisation of organometallic $Si(CH_3)_4$ is

A. octahedral, sp^3d^2

B. tetrahedral, sp^3

C. bent, sp

D. trigonal, sp^2

Answer: B

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76. An aqueous solution of sodium carbonate absorbs NO and NO_2 to yield

A. $CO_2 + NaNO^3$

B. $CO_2 + NaNO_2$

C. $NaNO_2 + CO$

D. $NaNO_3 + CO$

Answer: C

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77. About $20km$ above the earth ,there is an ozone layer ,Which one of the following statement about ozone and ozone layer is true?

A. Ozone is triatomic linear molecule

B. It is harmful as it stops useful radiation

C. It is beneficial to us as it stops UV-radiation

D. Conversation of O_3 to O_2 is an endothermic reaction

Answer: C

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78. Which of the following oxides of chlorine is obtained by passing dry chlorine over silver chlorate at $90^{\circ} C$.

A. Cl_2O

B. ClO_3

C. ClO_2

D. ClO_4

Answer: C

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79. Which among the following is paramagnetic ?

A. Cl_2O

B. ClO_2

C. Cl_2O_7

D. Cl_2O_6

Answer: B

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80. Which of the following statement is false ?

A. Radon is obtaind from the decay of radium

B. Helium is inert gas

C. Xenon is the most reactive among the rare gases

D. The most abundant rare gas found in the atmosphere is helium

Answer: D

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81. Noble gases do not react with other elements because

A. they are monoatomic

B. they are found in abundance

C. the size of their atoms is very small

D. they are completely paired up and have stable electron shells

Answer: D

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82. Which of the following acids has a peroxy linkage?

A. sulhourors acid

B. pyrosulphuric acid

C. dithionic acid

D. Caro's acid

Answer: D

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83. Polyanion formation is maximum in

A. nitrogen

B. oxygen

C. sulphur

D. boron

Answer: C

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84. Which of the following is incorrect for H_3BO_3

A. It is a strong tribasic acid

B. It is prepared by acidifying an aqeous solution of borax

C. It has a layer structure in which planar BO_3 units are joined by hydrogen bonds

D. It does not act as proton donor but acts as a Lewis acid by accpeting hydroxyl ion

Answer: A

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85. In graphite, electrons are

A. localised on each C-atom

B. localised on every third C-atom

C. spread out between the structure

D. Both (b) and (c)

Answer: D

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86. A solution of KBr is treated with each of the following which one would liberate bromine?

A. Hydrogen iodide

B. Sulphur dioxide

C. Chlorine

D. Iodine

Answer: C

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87. Which of the following species has four lone..

A. I

B. O^- ion has compartively smaller size than oxygen atom

C. Cl^-

D. He

Answer: C

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88. The pronounced change from non-metallic behaviour and also increase in the basicity of oxides from nitrogen to bismuth in group 15 is principally due to incresing size of the atoms. The ionisation potential of nitrogen is very high on account of its small size. However, ionisation potential decreases regularly on descending the group.

Which one of the following fluorides does not exist ?

A. NF_5

B. PF_5

C. AsF_5

D. SbF_5

Answer: A

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89. In the manufacture of bromine from sea water the mother liquor containing bromide is treated with

A. carbon dioxide

B. chlorine

C. iodine

D. sulphur dioxide

Answer: B

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90. strongest hydrogen bonding is shown by

A. water

B. ammonia

C. HF

D. hydrogen sulphide

Answer: C

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91. Elements of which of the following groups will form anions most readily ?

A. Oxygen family

B. Nitrogen family

C. Halogens

D. Alkali metals

Answer: C

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92. Which of the following bonds will be most polar?

A. N-Cl

B. O-F

C. N-F

D. N-N

Answer: C

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93. H_3PO_2 is the molecular formula of an acid of phosphorus. Its name and basicity respectively are

A. phosphorous acid and 2

B. hypophosphorous acid and 2

C. hypophosphorous acid and one

D. hypophosphoric acid and two

Answer: C

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94. Nitrogen is relatively inactive element because

A. its atom has a stable electronic configuration

B. it has low atomic radius

C. its electronegativity is fairly high

D. dissociation energy of its molecules is fairly high

Answer: D

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95. Cane sugar on reaction with nitric acid gives

A. CO_2 and SO_2

B. $2HCOOH$

C. $(COOH)_2$

D. no reaction

Answer: C

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96. Number of electrons shared in the formation of nitrogen molecules is

A. 6

B. 10

C. 2

D. 8

Answer: A

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97. Water gas is produced by

A. passing steam through a red hot coke bed

B. saturing hydrogen with moisture

C. mixing oxygen and hydrogen in the ratio of $1:2$

D. heating a mixture of CO_2 and CH_4 in petroleum refineries

Answer: A

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98. Which of the following forces bind together carbon atoms in diamond?

A. Ionic

B. Covalent

C. Dipolar

D. van der Waal's

Answer: B

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99. Which is used in the laboratory for last drying of neutral gases?

A. P_2O_5

B. Ahyd. $CaCl_2$

C. Activated charcoal

D. Na_3PO_4

Answer: A

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100. the bleaching action of chlorine is due to

A. reduction

B. hydrogenation

C. chloronation

D. oxidation

Answer: D

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101. Pure nitrogen is prepared in the laboratory by heating a mixture of

A. $NH_4OH + NaCl$

B. $NH_4NO_3 + NaCl$

C. $NH_4Cl + NaOH$

D. $NH_4Cl + NaNO_2$

Answer: D

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102. $PH_4I + NaOH \rightarrow ?$

The product is

A. PH_3

B. NH_3

C. P_4O_6

D. P_4O_{10}

Answer: A

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103. PCl_3 reacts with water to form :

A. PH_3

B. H_3PO_3. HCl

C. $POCl_3$

D. H_3PO_4

Answer: B

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104. Basicity of orthophosphoric acid is

A. 2

B. 3

C. 4

D. 5

Answer: B

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105. P_2O_5 is heated with water to give

A. hypophosphours acid

B. phosphorous acid

C. hypophosphorous acid

D. orthophosphoric acid

Answer: D

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106. Aqueous solution of ammonia consists of

A. H^+

B. OH^-

C. NH_4^+

D. NH_4^+ and OH^-

Answer: D

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107. Oleum is

A. castor oil

B. oil of vitriol

C. fuming H_2SO_4

D. None of these

Answer: C

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108. Which would quickly absorb oxygen?

A. Alkaline solution of pyrogallol

B. Conc. H_2SO_4

C. Lime water

D. Alkaline solution of $CuSO_4$

Answer: A

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109. Glass is a:

A. liquid

B. solid

C. supercooled liquid

D. transparent-organic polymer

Answer: C

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110. Which of the following statement is not correct for nitrogen ?

A. Its electronegativity is very high

B. d-orbitals are available for bonding

C. it is a typical non-metal

D. its molecular size is small

Answer: B

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111. Bleaching powder reacts with a few drops of conc.HCl to yield

A. chlorine

B. hypochlorous acid

C. calcium oxide

D. oxygen

Answer: A

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112. it is possible to obtain oxygen from air by fractional distillation because

A. oxygen is in a different group of the periodic table from nitrogen

B. oxygen in more reactive than nitrogen

C. oxygen has higher boiling point than nitrogen

D. oxygen has a lower density than nitrogen

Answer: C

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113. The gases respectively absorbed by alkaline pyrogallon and oil of cinnamon is.

A. $O_3 . CH_4$

B. $O_2 . O_3$

C. $SO_2 . CH_4$

D. $N_2O . O_3$

Answer: B

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114. Oxygen will directly react with each of the following elements except

A. P

B. Cl

C. Na

D. S

Answer: B

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115. Which has the lowest boiling point?

A. NH_3

B. PH_3

C. $AsCl_3$

D. SbH_3

Answer: B

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116. When orthophosphoric acid is heated to $600^{\circ} C$ the product formed is

A. PH_3

B. P_2O_5

C. H_3PO_3

D. HPO_3

Answer: D

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117. Each of the following is true for white and red phosphorus except that they

A. both are soluble in CS_2

B. Can be oxidised by heating in air

C. consist of the same kind of atoms

D. can be converted into one another

Answer: A

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118. Which of the following compound does not exist ?

A. NCl_5

B. AsF_5

C. $SbCl_5$

D. PF_5

Answer: A

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119. The substance used as a smoke screen in warfare is

A. $SiCl_4$

B. PH_3

C. PCl_5

D. acetylene

Answer: A

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120. An example of a double salt is

A. bleaching powder

B. $K_4[Fe(CN)_6]$

C. `hypo

D. potash alum

Answer: D

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121. Which of the following is a nitric acid anhydride?

A. NO

B. NO_2

C. N_2O_5

D. N_2O_3

Answer: C

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122. Hypo is used in photography to

A. reduce AgBr grains to metallic silver

B. convert metallic silver to silver unit

C. remove undecomposed silver bromide as a soluble complex

D. remove reduced silver

Answer: C

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