QB365 Question Bank Software Study Materials

p - Block Elements - I 50 Important 1 Marks Questions With Answers (Book Back and Creative)

12th Standard

Chemistry

Total Marks : 50

Multiple Choice Question

50 x 1 = 50

1) An aqueous solution of borax is_____.

(a) neutral (b) acidic **(c) basic** (d) amphoteric

2) Boric acid is an acid because its molecule_____.

(a) contains replaceable H^+ ion (b) gives up a proton (c) combines with proton to form water molecule

(d) accepts OH^- from water, releasing proton.

3) Which among the following is not a borane?

(a) B_2H_6 **(b) B_3H_6** (c) B_4H_{10} (d) none of these

4) Which of the following metals has the largest abundance in the earth's crust?

(a) Aluminium (b) Calcium (c) Magnesium (d) Sodium

5) In diborane, the number of electrons that accounts for banana bonds is _____.

(a) six (b) two **(c) four** (d) three

6) The element that does not show catenation among the following p-block elements is _____.

(a) Carbon (b) silicon **(c) Lead** (d) germanium

7) Carbon atoms in fullerene with formula C_{60} have _____hybridisation.

(a) sp^3 hybridised (b) sp hybridised **(c) sp^2 hybridised** (d) partially sp^2 and partially sp^3 hybridised

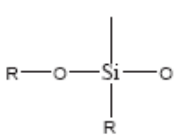
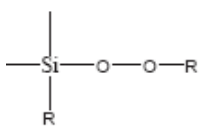
8) Oxidation state of carbon in its hydrides _____.

(a) +4 (b) -4 (c) +3 (d) +2

9) The basic structural unit of silicates is _____.

(a) $(SiO_3)^{2-}$ (b) $(SiO_4)^{2-}$ (c) $(Sio)^{-}$ **(d)** $(SiO_4)^{4-}$

10) The repeating unit in silicone is_____.

(a) SiO_2 **(b)**  (c)  (d) 

11) Which of these is not a monomer for a high molecular mass silicone polymer?

(a) Me_3SiCl (b) $PhSiCl_3$ (c) $MeSiCl_3$ (d) Me_2SiCl_2

12) Which of the following is not sp^2 hybridised?

(a) Graphite (b) graphene (c) Fullerene **(d) dry ice**

13) The geometry at which carbon atom in diamond are bonded to each other is _____.

(a) Tetrahedral (b) hexagonal (c) Octahedral (d) none of these

Which of the following statements is not correct?

14) Which of the following statements is not correct?

(a) Beryl is a cyclic silicate (b) Mg_2SiO_4 is an orthosilicate (c) SiO_4^{4-} is the basic structural unit of silicates

(d) Feldspar is not aluminosilicate

15)

Column-I		Column-II	
A	Borazole	1	$B(OH)_3$
B	Boric acid	2	$B_3N_3H_6$
C	Quartz	3	$Na_2[B_4O_5(OH)_4]8H_2O$
D	Borax	4	SiO_2

(a)

A	**B**	**C**	**D**
2	**1**	**4**	**3**

(b)

A	B	C	D
1	2	4	3

(c)

A	B	C	D
1	2	4	3

(d) None of these

16) Duralumin is an alloy of _____.

(a) Cu,Mn (b) Cu,Al,Mg (c) Al,Mn **(d) Al,Cu,Mn,Mg**

17) The compound that is used in nuclear reactors as protective shields and control rods is _____.

(a) Metal borides (b) metal oxides (c) Metal carbonates (d) metal carbide

18) The stability of +1 oxidation state increases in the sequence _____.

(a) Al < Ga < In < Tl (b) Tl < In < Ga < Al (c) In < Tl < Ga < Al (d) Ga< In < Al < Tl

19) The stability of +1 oxidation state among Al, Ga, In and Tl increases in sequence _____.

(a) TI < In < Ga < Al (b) In < TI < Ga < Al (c) Ga < In < Al < TI **(d) Al < Ga < In < TI**

20) Graphite has _____.

(a) 2-d sheet structure (b) Vander waals force between successive layers of carbon sheets

(c) Sp^2 hybridised carbon linked with other three carbon atoms in hexagonal planar structure **(d) all the above**

21) Which one is correct statement for zeolite?

(a) Zeolites are aluminosilicates having three dimensional framework

(b) Hydrate zeolites are used as ion exchangers in hardening of soft water (c) Zeolites are alumino silicates

(d) all the above

22) Elements of group 13 mainly form covalent compounds because _____

(a) small size (b) electro negativity values are high (c) ionization energy is very high **(d) both (a) and (c)**

23) All elements except carbon have the tendency to show maximum covalency of six _____

(a) due to presence of vacant d-orbitals (b) due to absence of vacant d-orbitals

(c) due to presence of partially filled d-orbitals (d) due to presence of completely filled d-orbitals

24) The silicates which contain discrete tetrahedral units are _____.

(a) ortho silicates **(b) sheet silicates** (c) pyrosilicates (d) three dimensional silicates

25) Borax is _____.

(a) $Na_2[B_4O_5(OH)_4).8H_2O$ (b) $Na_2[B_4O_5(OH)_6).7H_2O$ (c) $Na_2[B_4O_3(OH)_8].6H_2O$ (d) $Na_2[B_4O_2(OH)_{10}).5H_2O$

26) Which one of the following is the strongest oxidising agent?

(a) flourine (b) chlorine (c) bromine (d) iodine

27) The elements in which their last electron enters the p-orbital, constitute the _____ elements.

(a) s-block (b) d-block (c) f-block **(d) p-block**

28) AlF_3 is soluble in HF only in the presence of KE. It is due to the formation of _____.

(a) $K_3[AlF_3H_3]$ **(b)** $K_3[AlF_6]$ (c) AlH_3 (d) K_3[AlFH]

29) The semi conducting nature of elements such as _____ & _____ made a revolutionary change in the field of modern electronics.

(a) Si & Ge (b) Ge & Ga (c) Si & Ga (d) None

30) The general electronic configuration of p-block element is _____.

(a) ns^2np^{1-6} (b) ns^0np^{0-6} (c) ns^2np^{0-6} (d) ns^2np^7

31) Which is a metalled?

(a) B **(b) Be** (c) S (d) C

32) In heavier post transition metals, the outer s-electrons (ns) have a tendency to remain inert and show reluctance to take part in the bonding which is known as _____.

(a) inert gases **(b) inert pair effect** (c) catenation (d) none of these

33) Inert pair effect is observed in groups _____.

(a) 14, 15 (b) 13, 14, 15 **(c) 13, 14, 15, 16** (d) All of these

34) Kernite is _____.

(a) $Na_2[B_2O_6,(OH)_3]2H_2O$ (b) $AlO_3.8H_2O$ (c) $Na_2[B_4O_5(OH)_4].8H_2O$ **(d)** $Na_2[B_4O_5(OH)_4].2H_2O$

35) Boron reacts with oxidising acids such as H_2SO_4, & HNO_3 and forms_____.

(a) diborane (b) borates (c) borides **(d) boric acid**

36) Borax glass is _____.

(a) $Na_2B_4O_7.5H_2O$ (b) $B_2O_3.NaBO_2$ **(c)** $Na_2B_4O_7$ (d) H_3BO_3

37) Which is used to identify colored metal ions?

(a) Boric acid (b) Borides (c) Borates **(d) Borax**

38) Boric acid consists of this unit_____.

(a) $[BO_3]^{2-}$ (b) $[B_2O_3]^{+1}$ **(c)** $[BO_3]^{3-}$ (d) $[B_2O_5]^{2-}$

39) Which is used as an antiseptic and an eye lotion?

(a) Boric acid (b) Borax (c) Borate (d) None

40) The valence electrons of diborane is _____.

(a) 5 (b) 6 **(c) 12** (d) 18

41) It is used in welding torches _____.

(a) Boric acid (b) Borax **(c) Diborane** (d) Ethyl borate

42) The C_{60} molecule is called as_____ because of its structure.

(a) buck minster fullerens (b) bucky balls (c) diamond **(d) both (a) & (b)**

43) Which one is phosgene?

(a) $COCl.5H_2O$ (b) $COCI_3$ **(c)** $COCI_2$ (d) $CaCI_2$

44) Calcination of lime produces this as by product _____.

(a) CO_2 (b) CO (c) Ca (d) C

45) Biologically CO_2 is important for _____.

(a) chlorophyll **(b) photo synthesis** (c) atmosphere (d) none

46) The mineral which contains silicon and oxygen in tetrahedral $[SiO_4]^4$ units linked together in different pattern are called _____.

(a) silicones **(b) silicates** (c) silanes (d) none

47) Olivine is _____.

(a) Be_2SiO_4 (b) $Be_3Al_2[SiO_3]_6$ **(c) $(Fe/Mg)_2SiO_4$** (d) $LiAl(SiO_3)_2$

48) $[Si_4O_{11}]_n^{6n-}$ ions are _____.

(a) double chain silicates (b) pyoxenes (c) amphiboles **(d) both (a) & (c)**

49) _____ are fibrous and non-combustible silicates

(a) Asbestos (b) Amphiboles (c) Zeolites (d) Inosilicate

50) The affinity of Boron-10 for neutrons is the basis of a technique known as _____.

(a) BECT **(b) BNCT** (c) BOCC (d) EDTA