# Pavzi Media

## Polycet - 2016

## English Medium

### Model Paper for Chemistry

**1. Which of the following is strong bond**

1. **Covalent**
2. Ionic
3. $\sigma$ bond
4. $\pi$ bond

**2. Which of the following is polar molecule?**

1. $H_2$
2. **HCl**
3. $F_2$
4. $N_2$

**3. Which of the following covalent compound is soluble in water?**

1. Naphelene
2. Kerosene
3. **HCl**
4. All the above

**4. The type of hybridization in $BF_3$,$NH_3$,$H_2O$ Is**

1. Sp,sp,sp
2. $Sp^2$,$sp^3$, sp
3. Sp $sp^2$ $sp^3$
4. **$Sp^2$ ,$sp^3$, $sp^3$**

**5. The bond angles in $BeCl_2$,$BF_3$,$H_2O$ IS**

1. 180 °– 109° 28’ , 104° 31’
2. **180° , 120° , 104° 31’**
3. 109° 28’,120° ,180°
4. 109° 31’ ,109° 28’,120°

**6. The orbitals overlapping in formation of $H^2O$ is……**

1. $sp^3$ – p
2. p – p
3. $sp^3$ - $sp^3$
4. **$sp^3$ – S**

**7. In which of the following $sp^2$- $\sigma$ bond is present?**

1. $BeCl_2$
2. $BF_3$
3. **$NH_3$**

4. $H_2O$

**8. $\pi$ (Pi) bond is formed by**

1. End on end overlapping
2. Lateral overlapping
3. Both
4. **None of the above**

**9. The process of inter mixing of atomic orbital is called**

1. Combination
2. **Decombination**
3. Hybridization
4. Overlapping

**10. The electronic is in valency shell are called**

1. Inner electrons
2. Core electrons
3. Excited electrons
4. **Valence electrons**

**11. Octet configuration is absent in**

1. **HE**
2. NE
3. Ar
4. Kr

**12. Covalency in a molecules is equal to**

1. Atomic number
2. **No. of covalent bonds formed**
3. No. of atoms involved
4. No. of electrons in an atom

**13. VBT was proposed by**

1. Kossel
2. Lewis
3. **Paulling**
4. Sidgwick

**14. The type of bond, the valency electrons are shared among all the atoms of metallic elements.**

1. Covelent bond
2. Ionic bond
3. **Metallic bond**
4. Sigma bond

**15. Which of the following is electronegative?**

1. Sodium
2. **Oxygen**
3. Magnesium
4. Calcium

**16. An element $X^{23}$ forms ionic compound with another element `Y' . then the charge on the ion formed by X is**

1. **+1**
2. +2
3. −1
4. −2

**17. An element `A' forms a chloride `$ACl_4$'. The number of electrons in the valency shell of `A'**

1. 1
2. 2
3. 3
4. **4**

**18. An element `A' from cation b loss of two electrons and `B' gain two electrons to form anion. Then the formula of ionic compound formed is**

1. $A_2B$
2. $AB_2$
3. **AB**
4. $AB_3$

**19. Which Of the following compound has different bond?**

1. NaCl
2. $Na_2O$
3. **$H_2O$**
4. CaO

**20. The number of element present in modern periodic tables**

1. 106
2. 109
3. **115**
4. 100

**21. Who among the following defined the element?**

1. Moseley
2. Newland
3. Dobereiner
4. **Boyle**

**22. Hydrogen atom is the building material and other elements are combination of hydrogen atoms. This is given by**

1. **Proust**
2. Boyle
3. Lother Meyer
4. Moseley

**23. Trids means**

1. Group of eight elements
2. **Group of three elements**
3. Group of 18 elements
4. Group of seven elements

**24. Which of the following is not Debereiner's triad?**

1. Li ,Na , K
2. S , se, Te
3. **O, S , Se**
4. Mn , Cr ,Fe

**25. Who made the first attempt to classify the elements?**

1. Newlands
2. **Debereiner**
3. Moseley
4. Lother Meyer

**26. In the Debereiner' Triad, the atomic weight of middle element id equal to**

1. Sum of atomic weight of two elements
2. Product of atomic weight of two elements
3. **Average of atomic weight of two elements**
4. Ratio of atomic weight of two elements

**27. Law of octaves depends on**

1. Atomic size
2. **Atomic weight**
3. Atomic number
4. Atomic values

**28. According to which law, the 8$^{th}$ element show similar property with first element.**

1. Traid law
2. **Law of octaves**
3. Mosely law
4. All of these

**29. Number of elements in Newlands periodic table**

1. 106
2. 109
3. **56**
4. 65

**30. Mendeleeff's periodic tale (short from of period table ) consist of**

1. 7 Periods, 7 groups
2. 7 Periods, 18 groups
3. **7 periods, 8 groups**
4. 18 periods, 7 groups

**31. Sub group A and B with same group are present in**

1. Modern periodic table
2. **Mosley periodic table**
3. Mendeleeff's periodic table
4. None of these above

**32. Eka- boron is**

1. **Scandium**
2. Boron
3. Callium
4. Germanium

**33. Eka element are**

1. Precious elements
2. Available in earth
3. **Name given by Mendeleeff for missing elements**
4. Elements in lanthanides

**34. The equivalent weight of `Be' is**

1. 13.5
2. 9
3. **4.5**
4. 4

**35. The melting point of gallium is**

1. 37° C
2. 32°C
3. **30.2° C**
4. 39° C

**36. What is the valency of Eka aluminum in its oxide?**

1. 1
2. 2
3. **3**
4. 4

**37. Which of the following is not present in rainbow?**

1. Blue
2. Green
3. Red
4. **Pink**

**38. The number of wave peaks that pass by a given point per unit time is called**

1. Wavelength
2. Wave number
3. **Frequency**
4. Amplitude

39**. The range of colors or wavelengths covering red color to violet color is called the**

1. Emission spectrum
2. Absorption spectrum
3. **Visible spectrum**
4. Line spectrum

**40. Electromagnetic energy can be gained or lost in discrete values and not in a continuous manner. This is given by**

1. **Planck**
2. Rutherford
3. Einstein
4. Bohr

**41. The spectrum given by emitted radiation is called**

1. Absorption spectrum

2. Visible spectrum
3. **Emission spectrum**
4. All of the above

**42. The path or an electron around the nucleus is called**

1. Orbit
2. Shell
3. Energy level
4. **All**

**43. Stationary orbits have fixed**

1. Energy
2. Radius
3. **Both**
4. None

**44. Which of the following is not included in Bohr atomic model?**

1. Stationery orbits
2. Energy of orbits is quantized
3. **Elliptical orbits**
4. Absorption of energy when an electron jumps from lower orbit to higher orbit.

**45. Which or the following is defect in Bohr theory**?

1. It could not explain the spectrum in atoms containing more than one electron.
2. It could not explain fine structure of the spectrum.
3. It could not explain formation of chemical bonds.
4. **All the above**

**46. The elliptical orbits were proposed by**

1. Rutherford
2. Bohr
3. **Sommerfeld**
4. Schrodinger

**47. The fine spectra of atom is explained by**

1. Rutherford
2. Bohr
3. De Broglie
4. **Sommerfeld**

**48. For a given circular orbits, number of elliptical orbits possible are**

1. n
2. **$n - 1$**
3. $n + 1$
4. $2l + 1$

**49. Quantum theory was proposed by**

1. Rutherford
2. Thomson
3. **Planck**
4. Bohr

**50. Quantum mechanical model was developed by**

1. De Broglie
2. **Erwin Schrodinger**
3. Sommerfeld
4. Heisenberg

**51. The region of space around the nucleus where the probability of finding electron is called**

1. Orbit
2. **Orbital**
3. Nucleus
4. Quantum state

**52. Shape of P orbital is**

1. Spherical

2. **Dumbbell**
3. Double dumbbell
4. Circular

**53. Number of Nodal planes for `s' orbit is**

1. **0**
2. 1
3. 2
4. 3

**54. Which of the following substance when mixed together will product table salt?**

1. Sodium thiosulphate and sulphur dioxide
2. **Hydrochloric and socium hydroxide**
3. Chlorine and oxygen
4. Nitric acid and sodium hydrogen carbonates

**55. What color would hydrochloric acid (PH = 1) turn universal indicator?**

1. Orange
2. Purple
3. Yellow
4. **Red**

**56. Which of the following medicines is used for treating indigestion?**

1. Antibiotic
2. Analgesic
3. **Antacid**
4. Antiseptic

**57. Which gas is produced when magnesium is made to react with hydrochloric acid?**

1. **Hydrogen**
2. Oxygen
3. Carbon dioxide
4. no gas is produced

**58. Which of the following gives different colors over a range of pH?**

1. Litmus
2. Methyl orange
3. Phenolophthalein
4. **Universal indicator**

**59. Which of the following is not acidic oxide?**

1. $SO_2$
2. $CO^2$
3. **CaO**
4. $O_2$

**60. Which of the following is not basic oxide?**

1. CaO
2. MgO
3. **$CO_2$**
4. $Na_2O$

**61. Which of the following is the common element to all acids?**

1. Oxygen
2. **Hydrogen**
3. Chlorine
4. Sulphur

**62. Which of the following compound turns blue litmus to red?**

1. **Acid**
2. Base
3. Salts
4. 1 and 2

**63. The substance which produce $H^+$ ions solution are called**

1. Salts
2. **Acids**
3. Bases
4. Neutral solutions

**64. The $H^+$ ion aqueous solution exists as**

1. Hydroxyl ion
2. **Hydronium ion**
3. Ammonium ion
4. All the above

**65. Which of the following ion is given by bases?**

1. $H^+$
2. $H_3O^+$
3. $OH^-$
4. **$CO_3^{2-}$**

**66. Which of the following is slightly soluble in water?**

1. **$Be(OH)_2$**
2. $Ba(OH)_2$
3. NaOH
4. KOH

**67. The process of addition of water to acid or base and decrease in concentration is called**

1. Concentration
2. **Dilution**
3. Neutralization
4. Hydration

**68. Dry HCl is not turn blue litmus to red. This is due to**

1. Dry HCl is a acid
2. **Dry HCl is not produced $H^+$ ions**
3. It is a gas
4. It is pungent in odour

**69. Which of the following is a chemical change?**

1. Rusting of iron
2. Burning of coal
3. Digestion of food
4. **All of the above**

**70. A balanced equation contains**

1. Equal number of moles of reactant an products
2. Equal number of molecules of reactant , an products
3. **Equal number of atoms of different elements on reactant side and product side**
4. All the above

**71. Formula of lime stone** is

1. $Ca(OH)_2$
2. **$CaCO_3$**
3. CaO
4. $Ca(NO)_3$

**72. Unbalanced equation is called**

1. Basic equation
2. **Skeleton equation**
3. Stoichometric equation
4. Fundamental equation

**73. The substances that are present on the left hand side of a chemical equation are called**

1. **Reactants**
2. Products
3. Reagents
4. By products

**74. Formula of quick lime**

1. $Ca(OH)_2$
2. **CaO**
3. $CaCO_3$
4. $Ca(HCO)_3$

**75. When quick lime is added to water, which of the following is formed?**

1. Lime stone
2. **Lime water**
3. Quick lime
4. Gypsum

**76. The color or $BaSO_4$ precipitate is**

1. Black
2. **White**
3. Yellow
4. Brown

**77. Which of the following is the smallest particle involved in a chemical reactions?**

1. Element
2. Molecule
3. **Atom**
4. ion

**78. A chemical equation which contain the same number of atoms of different elements on reactant side and product side is**

1. Skeleton equation
2. **Balanced equation**
3. Unbalanced equation
4. Any of the above

**79.A formula unit indicates**

1. One unit of atom
2. One unit of molecules
3. One unit of ion
4. **All the above**

**80. $X\ H_2 + y\ O_2 \rightarrow z\ H_2O$. the values of x, y, z is**

1. X =1, y=1, z=1
2. **X=2, y=1,z=3**
3. X=2, y=2, z=2
4. X=2, y=1, z=1

**81. The decomposition of vegetables into compost is an example of.....**

1. Combination
2. **Decomposition**
3. Displacement
4. Double displacement

**82. The chemical reactions in which energy is absorbed to form a new compound is called.....**

1. Exothermic reaction
2. **Endothermic reaction**
3. Redox reaction
4. Balanced reaction

**83. Metals displaces hydrogen gas from dilute acids. This is an example for**

1. Combination reaction
2. Decomposition reaction
3. **Displacement reaction**
4. Balanced reaction

**84. When iron mail dipped in $CuSO_4$, the nail becomes brown due to**

1. **Deposition of copper on iron**
2. Dissolution of iron
3. Reduction of iron
4. Oxidation of Cu

**85. The color of pbO is**

1. Brown
2. Red
3. Black
4. **Yellow**

**86. When dilute hydrochloric acid is added to iron fillings**

1. **Hydrogen gas and iron chloride are formed**
2. Chlorine gas and iron hydroxide are formed

3. No reaction takes place
4. Iron salt and water are produced

**87. The reaction of formulation of hydrogen chloride from hydrogen and chlorine represents following types of reaction**

1. Decomposition
2. Displacement
3. **Combination**
4. Double-displacement

**88. The no. of valency electrons in carbon atom is**

1. 1
2. 2
3. 3
4. **4**

**89. No. of covalent bonds formed by carbon in its compounds is**

1. 1
2. 4
3. **6**
4. 12

**90. Carbon forms**

1. Single bond
2. **Double bond**
3. Triple bond
4. All the above

**91. The hybridization in methane is**

1. $Sp^3$
2. **$sp^2$**
3. sp
4. $sp^3$ d

**92. Hybridization and bond angle in ethene is**

1. **$Sp^3$,120°**
2. $Sp^2$,120°
3. Sp,180°
4. $Sp^3$,109°28′

**93. Number of $\sigma$ and $\pi$ bonds in ethylene is**

1. 1 , 4
2. **2 , 5**
3. 0 , 4
4. 1 , 5

**94. Number of c – c $\sigma$ bonds in Acetylene is**

1. 1
2. 2
3. **3**
4. 4

**95. Number of sp$-$ $s$ $\sigma$ bond in $C_2H_2$ is**

1. 1
2. 2
3. **3**
4. 4

**96.T he concept of hybridization was introduced by**

1. Bohr
2. Mullikan
3. Pauling
4. **Sidgwick**

**97. In which of the following state carbon undergoes hybridization?**

1. Ground state
2. **First excited state**
3. Second excited state
4. In atomic state

**98. The phenomenon of existence of same element in different physical form is called**

1. Isomerism

2. **Allotropy**
3. Sublimation
4. Isotopes

**99. Which of the following is not a amorphous forms of carbon?**

1. Coal
2. **Coke**
3. $C_{60}$
4. Gas carbon

**100. Which of the following is not crystallite allotrope of carbon?**

1. Diamond
2. Graphite
3. **$C_{60}$**
4. Lamp black