ASSISTANT CHEMIST, PLANTATION CORPORATION

EXAM DATE:20-12-2013

1.Internal energy of a system is:

A.State function*

B.Path function

C.Both state and path function

D.None of the above

Ans:A

2.Born equation can be used for calculating:

A.Made lungs constant

B.Lattice energy of an ionic crystal

C.Potential energy of an ionic crystal

D.All the above*

Ans:D

3. Which of the following is correct for lyophilic sols?

A.They are irreversible

B.They are formed by inorganic substances

C.They are readily coagulated by addition of electrolytes

D.They are self stabilized*

Ans:D

4. Which of the following is a fully fluorinated polymer?

A.Neoprene

B.Teflon*

C.Thiokol

D.PVC

Ans:B

5.On hydrolysis one molecule of sucrose is converted in to:

A.Two molecules of glucose

B.Two molecules of fructose

C.Two molecules of glucose and one molecule of fructose

D.One molecule of glucose and one molecule of fructose*

Ans:D

6. According to Fajan's rule a covalent bond is favoured by

A.Small cation and small anion

B.Large cation and large anion

C.Small cation and large anion*

D.Large cation and small anion

Ans:C

7. The Dipole moment of carbon dioxide molecule is:

A.Zero*

B.One

C.Two

D.Three

Ans:A

8. Which of the following metals can occur in nature in the free state?

A.Potassium

B.Gold*

C.Titanium

D.Aluminium

Ans:B

9.An alloy containing nickel is:

A.German silver*

B.Brass

C.Gun metal

D.Bronze

Ans:A

10.Ultra pure metal can be prepared by:

A.Electrolytic refining

B.Zone refining*

C.Oxidative refining

D.Smelting

Ans:B

11.Which among the following does not belong to the category of science?

A.Astronomy

B.Astrology*

C.Geology

D.Computer Science

Ans:B

12. Hydrogen was discovered by:

A.Henry Cavendish*

B.Joseph Black

C.G.N.Lewis

D.Antoine Lavoisier

Ans:A

13. The first known organic compound synthesized was:

A.Acetic acid

B.Urea*

C.Cane sugar

D.Glucose

Ans:B

14.Cyclo hexane is a -----compound

A.Aliphatic

B.Aromatic

C.Hetero cyclic

D.Alicyclic*

Ans:D

15.The most electro negative element is:

A.Oxygen

B.Nitrogen

C.Flourine*

D.Boron

Ans:C

16.On moving down a group first ionization energy:

A.Increases

B.Decreases*

C.Increases then decreases

D.Remains the same

Ans:B

17. Which among the following has maximum ionizing power?

A.Alpha rays

B.Beta rays

C.Gamma rays*

D.Cathode rays

Ans:C

18. Which is not an oxygen carrier?

A.Haemoglobin

B.Haemerythrin

C.Haemocyanin

D.Myoglobin*

Ans:D

19. Radiant energy of Sun is due to:

A.Disintegration

B.Combustion

C.Nuclear Fission

D.Nuclear fusion*

Ans:D

20.From left to right along the second period in the long form of the periodic table the electronegativity

A.Increases*

B.Decreases

C.Fluctuates

D.Remains the same

Ans:A

21. The nuclear magnetic resonance spectra lies within:

A.Infra red region

B.Visible or ultra violet region

C.Radio wave region*

D.Micro wave region

Ans:C

22.The isotones contains the same number of:

A.Neutrons*

B.Protons

C.Electrons

D.Both A and B same

Ans:A

23.Alkyl halides may be prepared from alcohols by the action of:

A.Phospherous halides

B.Halogen acids

C.Thionyl chlorides

D.All of these*

Ans:D

24.Intermediate in a percyclic reaction is:

A.Carbocation

B.Radical

C.Carbanion

D.None of these*

Ans:D

25. Which of the following can act as a phase transfer catalyst?

A.Pinacol

B.Pinacolone

C.Crown ether*

D.Ethylene oxide

Ans:C

26.A species which can both absorb and transfer rediant energy for activation of the reactant molecule is called:

A.Radio active substance

B.An ionizer

C.A photo chemical substance

D.A photo sensitizer*

Ans:D

27.Ziesels method is used for the estimation of:

A.Hydroxyl group

B.Methoxy group*

C.Phenoxy group

D.Ethyl group

Ans:B

28.Shift of Absorption to longer wavelength is called:

A.Hyposochromic shift

B.Hyper chromic shift

C.Hypochromic shift

D.Batho chromic shift*

Ans:D

29.That part of a molecule which absorbs electro magnetic radiation is called

A.Chromophore*

B.Auxochrome

C.Absorber

D.Activator

Ans:A

30.The ESR spectrum of methyl radical contains ------lines

A.2

B.3

C.4*

D.6

Ans:C

31. When some non volatile solute is added to a volatile solvent there is an increase in its:

A.Vapour pressure

B.Boiling point*

C.Freezing point

D.Osmotic pressure

Ans:B

32.Which one of the following IM solutions will show the highest freezing point?

A.Urea*

B.Ammonium sulphate

C.Sodium chloride

D.Copper sulphate

Ans:A

33.Pattinsons process is used for the profitable removal of:

A.Lead from lead monoxide

B.Silver from argentiferrous lead*

C.Lead from silver ore

D.None of the above

Ans:B

34.A system consisting of one phase only is said to be:

A.Monovarient

B.Monomeric

C.Homogeneous*

D.Heterogeneous

Ans:C

35.Which among the following make use of Tyndall effect?

A.Ultra Microscope*

B.Dialyser

C.Ultra Centrifuge

D.Ultra filter

Ans:A

36.Zeolites are used as:

A.Ion exchangers

B.Molecular sieves

C.Shape selective catalyst

D.All the above*

Ans:D

37.The number of atoms per unit cell in a simple cubic, FCC and BCC arrangement are respectively:

A.8,14,9

B.1,4,2*

C.1,2,4

D.4,1,2

Ans:B

38. Every colloidal system is:

A.Homogeneous

B.Heterogeneous*

C.Contains one phase

D.Homogeneous and Heterogeneous

Ans:B

39. Following is an Emulsifier:

A.Oil

B.Water

C.Sodium Chloride

D.Soap*

Ans:D

40.The sky appears blue.It is due to:

A.Reflection

B.Absorption

C.Scattering*

D.Refraction

Ans:C

41.In the hydrogenation of oils the catalyst used is:

A.Iron

B.Platinum

C.Nickel*

D.Molybdenum

Ans:C

42.Starch is converted into disaccharide in the presence of:

A.Diastase*

B.Maltase

C.Lactase

D.Zymase

Ans:A

43. With rise in temperature surface tension of the liquid:

A.Increases

B.Decreases*

C.Remains constant

D.Sometimes increases and sometimes decreases

Ans:B

44.The temperature at which second virial coefficient of a real gas is zero is called:

A.Critical temperature

B.Eutectic temperature

C.Boyle temperature*

D.Boiling point

Ans:C

45.Which among the following is a chelating ligand?

A.Oxalate ion*

B.Carbon monoxide

C.Pyridine

D.Cyanide ion

Ans:A

46.Which is not a zinc containing enzyme?

A.Carboni anhydrase

B.Carboxy peptidase

C.Alcohol dehydrogenase

D.Ribo nucleotide reductase*

Ans:D

47.Which among the following constitute a nano system confined in one dimension?

A.Nano layer*

B.Nano wire

C.Nano tube

D.Nano particle

Ans:A

48. Nutrients required by plants in relatively large amounts are called:

A.Macro nutrients *

B.Micro nutrients

C.Indirect fertilizers

D.Manure

Ans:A

49.The secondary valency of a metal ion in Werner's theory corresponds to:

A.Oxidation state

B.Charge

C.Co-ordination number*

D.None of these

Ans:C

50.Which among the following is used for estimating nickel?

A.Pottasium ferrocyanide

B.Dimethyl glyoxime*

C.Sodium polymeta phosphate

D.Methyl orange

Ans:B

51. Which among the following is regenerated cellulose?

A.Rayon*

B.Glycogen

C.Dacron

D.Glyptal

Ans:A

52.Which among the following is most stable conformer of cyclohexane?

A.Boat

B.Chair*

C.Gauche

D.Eclipsed

Ans:B

53.Geraniol is a :

A.Monoterpenoid*

B.Sesqui terpenoid

C.Diterpenoid

D.Triterpenoid

Ans:A

54.Bakelites are-----polymers.

A.Linear

B.Branched chain

C.Cross linked*

D.Natural

Ans:C

55. Which among the following is an aromatic amino acid?

A.Glycine

B.Alanine

C.Phenyl alamine*

D.Aspartic acid

Ans:C

56. Which among the following bases is not commonly found in DNA?

A.Uracil*
B.Thymine
C.Adenine
D.Cytosine
Ans:A
57.Water molecule can have -----number of modes of vibration
A.2
B.3*
C.4
D.0
Ans:B
58.The chief constituents of essential oils are:
A.Terpenes*
B.Alkaloids
C.Steroids

D.Esters

Ans:A

59. The solvent used in dry cleaning clothes is:

A.Alcohol

B.Acetone

C.Carbontetra chloride*

D.Freon

Ans:C

60.Chemically banana oil is:

A.Iso amyl acetate*

B.Ethyl butyrate

C.Octyl acetate

D.Mixture of hydrocarbons from banana leaves

Ans:A

61. Electrophilic reagents are:

A.Electron pair donars

B.Lewis acids*

C.Odd electron molecules

D.None of above

Ans:B

62.Carbonion is isostructural with:

A.Free radicals

B.Carbonium ion

C.Ammonia*

D.Carbene

Ans:C

63. The latest technique used for purification of organic compounds is:

A.Chromatography*

B.Vaccum distillation

C.Fractional distillation

D.Crystallization

Ans:A

64.The technique of gas chromatography is suitable for compounds which are:

A.Liquids

B.Highly volatile

C.Soluble in water

D.Vapourise with decomposition*

Ans:D

65.The laughing gas is:

A.Nitrous oxide*

B.Nitric oxide

C.Nitrogen trioxide

D.Nitrogen pentoxide

Ans:A

66.In the manufacture of iron from hematite limestone acts as:

A.Slag

B.Gangue

C.Flux*

D.Reducing agent

Ans:C

67.Deep sea divers used to respirate in a mixture of:

A.Oxygen and Nitrogen

B.Oxygen and helium*

C.Hydrogen and nitrogen

D.Oxygen and hydrogen

Ans:B

68.Nuclear fusion produces:

A.Argon

B.Deuterium

C.Helium*

D.Krypton

Ans:C

69.If a refrigerator door is opened, then we get:

A.Room heated*

B.Room cooled

C.More heat is passed out

D.No effect on room

Ans:A

70.Upon mixing pure water with sodium carbonate its pH becomes:

A.Increases*

B.Decreases

C.Remains constant

D.First increases then decreases

Ans:A

71. The pH value of a buffer solution after dilution:

A.Decreases

B.Increases

C.No change*

D.First increases then remains constant

Ans:C

72.Glow of phosphorus is due to:

A.Chemiluminescence

B.Photo sensitization

C.Fluroescence

D.Phosphorescence*

Ans:D

73. Rust is chemically:

A.Hydrated ferrous oxide

B.Hydrated ferric oxide*

C.Ferrous carbonate

D.Ferrous oxide

Ans:B

74.The experimental evidence for the particle nature of light was provided by:

A.Reflection

B.Diffraction*

C.Photoelectric effect

D.All of these

Ans:B

75.The ring system in cyano cobalamine is called:

A.Pophyrin

B.Tetra pyrrole

C.Corrin*

D.Purine

Ans:C

76.Which of the following is phenolic acid?

A.Carbolic acid

B.Salicylic acid*

C.Cinnamic acid

D.Stearic acid

Ans:B

77. The hydroxyl acid among the following is:

A.Citric acid*

B.Phthalic acid

C.Malonic acid

D.Succinic acid

Ans:A

78. Which of the following does not undergo Cannizaro's reaction?

A.Benzaldehyde

B.2-methyl propanal*

C.p-methoxy benzaldehyde

D.Formaldehyde

Ans:B

79. Tertiary alkyl halides are practically inert to substitution by ${\rm S}_{\rm N}2$ mechanism because of:

A.Insolubility

B.Instability

C.Inductive effect D.Steric hinderance*

Ans:D

80. Williamson's synthesis is used for the synthesis of:

A.Aldehyde

B.Acids

C.Ehers*

D.Alcohols

Ans:C

81.The greater-----of the carbon-metal bond, the greater the reactivity of the organometallic compound.

A.Bond strength

B.Bond length

C.Polarity*

D.Covalent character

Ans:C

82.Solutions with same osmotic pressure at a given temperature are called

A.Ideal solutions

B.Saturated solutions

C.Isotropic solutions

D.Isotonic solutions*

Ans:D

83.A liquid rises in a capillary tube. It is due to:

A.Surface tension*

B.Osmosis

C.Effusion

D.Viscosity

Ans:A

84. The third law of thermodynamics helps in the calculation of:

A.Enthalpy changes

B.Free energy changes

C.Internal energy changes

D.Absolute entropies*

Ans:D 85.Which obey Max Well-Boltz mann distribution?

A.Electronics in an atom

B.Molecules in an ideal gas*

C.Protons and neutrons in the nucleus of an atom

D.Beta particle emerging from a radioactive substance

Ans:B

86.Which compound is considered as anti aromatic?

A.Cyclo octa tetraene

B.Azulene

C.Ferrocene

D.Cyclo butadiene*

Ans:D

87. Acidity of chloro acetic acid is greater than that of acetic acid due to:

A.Inductive effect*

B.Electrometric effect

C.Mesomeric effect

D.Sterric effect

Ans:A

88.Which of the following imparts brick red colour to the flame?

A.Calcium *

B.Barium

C.Stroncium

D.None of these

Ans:A

89.The hemolytic fission of a chemical bond result in the formation of:

A.Carbo cation

B.Carbanion

C.Free radicals*

D.Carbenes

Ans:C

90.Which among the following has highest energy?

A.UV radiations

B.X-rays*

C.IR radiations

D.Visible radiations

Ans:B

91. The uncertainity principle was first stated by:

A.Albert Einstein

B.Max Planck

C.W Heisenberg*

D.Neils Bohr

Ans:C

92.A molecule is said to be chiral if it has:

A.Plane of symmetry

B.Centre of symmetry

C.Axis of symmetry

D.No element of symmetry*

Ans:D

93.Which of the following is a sandwich compound?

A.Tetra ethyl lead

B.Try methyl Arsine

C.Ethyl magnesium bromide

D.Ferrocene*

Ans:D

94.Conformational isomerism arises because of:

A.Restricted rotation

B.Free rotation about carbon single bond*

C.Clockwise rotation

D.Anti clockwise rotation

Ans:B

95.The number of optical isomers in the case of glucose are:

A.8

B.12

C.16*

D.20

Ans:C

96. Amino acids are the binding blocks of:

A.Proteins*

B.Carbohydrates

C.Vitamins

D.Fats

Ans:A

97.Natural fibre among the following is:

A.Starch

B.Cellulose*

C.Nylon-6

D.Teflon

Ans:B

98.As temperature increases the rate of the reaction:

A.Decreases then increases

B.Decreases

C.Increases*

D.Stays the same

Ans:C

99.Square root of the mean of the squares of the different velocities of the gas molecules is called:

A.Average velocity

B.Root mean square velocity*

C.Most probable velocity

D.None of the above

Ans:B

100.Evaporation of water from a beaker represents an example for:

- A.Closed system
- B.Open system*
- C.Isolated system

D.Macroscopic system

Ans:B