PMC PRACTICE TEST 07

CHEMISTRY

Q.1 **A mole of a substance contains _____particles**

A. 6.2×10^{22} B. 6.22×10^{22}

C. 6.02×10^{23} D. 6.5×10^{22}

Q.2 **Which alkali metal only combine with Nitrogen?**

A. Li B. Fr

C. Cs D. K

Q.3 **The elements having partially filled d and f orbitals are called as_____?**

A. Transition elements B. d-Block elements

C. f-block elements D. All of these

Q.4 **When sudden expansion of gases takes place, cooling occurs. This is called**

A. freezing effect B. Joule Thomson effect

C. Boyles effect D. J.Perrin effect

Q.5 **The presence of several fine lines in line spectrum shows the presence of**

A. Shells B. Energy levels

C. Sub shells D. All of these

Q.6 **In which phase SN_2 reactions are favored?**

A. Solid B. Liquid

C. Gas D. All of these

Q.7 **How many resonance structures of benzene are possible?**

A. 2 B. 3

C. 6 D. 4

Q.8 **Aldol condensation takes place in the presence of ____?**

A. H_2SO_4 B. $K_2Cr_2O_7$

C. NaOH D. $H_2O/H+$

Q.9 **In Ion Electron Method of Balancing, equations are**

A. Written with Oxidation numbers of Constituents

B. Split into two half reactions

C. Only oxidation part is written

D. Only Reducing part is written

Q.10 **Enthalpy change of solution of Na_2CO_3 is a _____reaction?**

A. Exothermic reaction B. Endothermic reaction

C. Spontaneous reaction D. Nonspontaneous reaction

Q.11 **In aluminum oxide, ions are present in the ratio 2:3, its formula in**

A. AlO B. Al_2O

C. Al_2O_3 D. Al_3O_2

Q.12 **Phenol is also called as?**

A. Carbonic acid B. Carbolic acid

C. Acetic acid D. Hydroxy acid

Q.13 **Alkyl iodides cannot be prepared directly by the halogenation of alkanes because?**

A. Iodine reacts slowly

B. Iodine reacts reversibly

C. HI formed reduces alkyl iodide again to starting material

D. All of these

Q.14 **Who introduce the concept of macromolecules?**

A. Runge B. Max Well

C. Staudinger D. None of these

Q.15 If a double bond is present between two carbons then this class of compounds in called as_____?

A. Alkanes
B. Alkynes
C. Carbonyl
D. Alkenes

Q.16 Which of the following Compound is not reduced by $NaBH_4$?

A. Acetaldehyde
B. Acetone
C. Carboxylic acid
D. Alkene

Q.17 Equilibrium constant has

A. Units
B. No Units
C. Both A and B
D. A negative value

Q.18 NaOH is named as caustic soda because

A. It corrodes the organic tissues
B. It is used in soda water
C. It reacts with chlorine gas
D. It reacts with fats to form soap

Q.19 Acetaldehyde oxidation will lead to formation of

A. Acetic acid
B. Butanoic acid
C. Propanoic acid
D. Ester

Q.20 At 0°C what is the physical state of water?

A. Ice
B. Liquid
C. Vapour
D. Both ice and liquid

Q.21 Acyclic hydrocarbons are also called as_____?

A. Closed chain hydrocarbons
B. Open chain hydrocarbons
C. Ring compounds
D. Alicyclic compounds

Q.22 How many molecules of H_2 adds in acetylene to form ethane?

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

Q.23 Rate of reaction has

A. No units
B. Unit of Moles/dm^3
C. Unit as Moles / litre
D. Unit as Moles/dm^3s^{-1}

Q.24 Nitrogen N_2 has ____number of electrons, protons and neutrons

A. 7,8,9
B. 7,7,7
C. 14,14,14
D. 14,14,15

Q.25 Proteins also contain bonding

A. Covalent
B. Ionic
C. Hydrogen
D. Metallic

Q.26 Energy in formation of a crystal lattice is

A. Absorbed
B. Released
C. Dependent on Crystal Size
D. None of these

Q.27 Enthalpy is the sum of internal energy

A. Work done
B. Entropy
C. Potential Energy
D. Kinetic Energy

Q.28 Human body contains _____kind of proteins?

A. 60000
B. Almost 10000
C. 5000
D. 200

Q.29 The arrangement of sub shells or orbitals is according to _____ rule

A. 2(l+1)
B. l+1
C. n+l
D. 2(n+l)

Q.30 In non-polar molecules, the strength of London forces depends on number of

A. Moles
B. Molecules
C. Atoms
D. All of these

Q.31 Atomic radii can be determined by measuring the distance b/w centers of ____atoms

A. Opposite
B. Adjacent
C. Parallel
D. Equal

Q.32 An atom is composed of electrons, protons, neutrons and

A. Hyprone
B. Neutrino
C. Anti-neutrino
D. All of these

Q.33 Which of the following is typical transition metal?

A. Sc
B. Y
C. Cd
D. Co

Q.34 The reaction in which a molecule is removed from a compound but no addition takes place is called as_____?

A. Substitution reaction
B. Elimination reaction
C. Addition reaction
D. Replacement reaction

Q.35 Tautomerism involves the transfer of_____?

A. Electron
B. Carbon atom
C. Functional group
D. H−atom

Q.36 Which of the following catalyst is used for the preparation of acidic anhydrides?

A. $K_2Cr_2O_7$
B. P_2O_5
C. $H+/H_2O$
D. H_2SO_4

Q.37 Which of the following compound shows strong H−Bonding with water?

A. C_2H_6
B. CH_3Br
C. CH_3OCH_3
D. C_2H_5OH

Q.38 Spectrometry is used when reactants and products absorb

A. Ultraviolet radiations
B. Visible radiation
C. Infrared radiation
D. All of these

Q.39 Which of the following reaction is used to locate the position of double bond in the compound?

A. Dehydration
B. Ozonolysis
C. MarkovniKov's addition
D. Oxidation with $KMnO_4$

Q.40 Which of the following compound is present in camphor and menthone?

A. Aldehyde
B. Alcohol
C. Esters
D. Ketones

Q.41 In a galvanic cell Copper compartment get net negative charge due to arrival of

A. Free charge from zinc sulphate solution
B. Electron
C. Protons
D. Zinc Ions

Q.42 Heat absorbed by a substance at constant pressure is equal to__?

A. ΔG
B. ΔH
C. ΔE
D. $\Delta H-\Delta E$

Q.43 The last subshell of alkaline earth metals

A. 2s
B. 1s
C. 2d
D. 3d

Q.44 Phenol is _____liquid?

A. Dense
B. Hard
C. Deliquescent
D. Intermittent

Q.45 When two carboxylic acids are strongly heated in the presence of P_2O_5, which product is formed?

A. Acid halides
B. Dimer

C. Acid anhydride
D. None of these

Q.46 The enzyme which is used in treatment of cancer in children?

A. Thrombin
B. L- asparaginase
C. Both
D. None of these

Q.47 At which temperature water has maximum density?

A. 2°C
B. 4°C
C. 0°C
D. <0°C

Q.48 The sum of mole fraction of the gases in a mixture of gases is

A. Always greater than 1
B. Always smaller than 1
C. May be equal or less than 1
D. Always 1

Q.49 At equilibrium if the concentration of product is increased reaction will proceed to

A. Forward Direction
B. Backward Direction
C. Remain Undisturbed
D. None of these

Q.50 Change in volume of a system depends only upon

A. Initial conditions
B. Final Conditions
C. Initial and final conditions
D. Path of the reaction

Q.51 According to_____ theory, atoms were the ultimate particles that cannot be divided further.

A. Bohr's
B. Rutherford's
C. Dalton's
D. Cannizzaro's

Q.52 If 9.8 g of sulfuric acid dissolved in excess quantity of water, it will yield _____moles of hydrogen ion (H^+) and _____mole of sulphate ions (SO_4^{-2})

A. 0.1, 0.2
B. 0.1, 0.3
C. 0.2, 0.4
D. 0.2,0.1

Q.53 lanthanides and actinides resemble in?

A. Ionization state
B. Oxidation state
C. Electronic configuration
D. Formation of complexes

Q.54 For balancing oxygen and hydrogen atoms in acids or neutral solutions

A. Water can be added
B. H+ ions can be added
C. Both A and B
D. OH^- ions can be added

Q.55 Organic compounds are

A. Ionic
B. Non ionic
C. Non covalent
D. Covalent

Q.56 All the three axes and three angles are of unequal length and none of the angle is 90°

A. Cubic system
B. Triclinic system
C. Tetragonal system
D. Monoclinic system

BIOLOGY

Q.57 Choose the region/s of spinal cord:

A. Cervical
B. Thoracic
C. Lumbar
D. All of these

Q.58 Which of the following is not the function of endoplasmic reticulum?

A. Transport of material
B. Mechanical support
C. Synthesis of conjugated molecules
D. All of these

Q.59 Centipedes belong to class _____ of arthropoda.

A. Arachnida
B. Insecta
C. Cephalopoda
D. Myriapoda

Q.60 What is the strengthening material of the prokaryotic cell wall?

A. Cellulose
B. Chitin
C. Silica waxes and lignin
D. Peptidoglycan or murein

Q.61 Which one is not the characteristic of Kingdom Animalia?

A. All animals are ingestive heterotrophs
B. All animals are eukaryotes
C. It is largest kingdom
D. All animals develop from the dissimilar gametes

Q.62 Sperms of liverworts, mosses, ferns move towards archegonia, in response to nucleic acid released by the ovum. This is an example of?

A. Chemotropic movement
B. Chemonastic movement
C. Haptonastic movement
D. Chemotactic movement

Q.63 Adaptation of traits to better fill a niche is known as which of the following?

A. Polymorphism
B. Gene linkage
C. Specialization
D. Replication

Q.64 Coccobacillus has a shape similar to which of the following?

A. Egg
B. Rod
C. Ball
D. None of these

Q.65 Compound Microscope was first used by

A. A.V. Leeuwenhoek
B. Pasteur
C. Janssen and Hans
D. None of these

Q.66 Nicotinamide adenine dinucleotide is an example of:

A. Coenzyme
B. Holoenzyme
C. Cofactor
D. Apoenzyme

Q.67 The loss of liquid via the hydathodes is called:

A. Ascent of sap
B. Plasmolysis
C. Imbibition
D. Guttation

Q.68 Herpes simplexes is caused by which virus?

A. Adenovirus
B. Pox virus
C. Influenza Virus
D. Herpes virus

Q.69 Two species can avoid competition, and better use the environment's resources by occupying different?

A. Adaptations
B. Polymorphism
C. Niches
D. Specialization

Q.70 Glycolysis takes place in?

A. Nucleus
B. Cytosol
C. Mitochondria
D. Ribosomes

Q.71 The pleural membranes cover which organ?

A. Kidney
B. Heart
C. Brain
D. Lungs

Q.72 Which method is of asexual reproduction?

A. Sporulation
B. Fission
C. Apomixis
D. All of these

Q.73 Out of 31 pairs of spinal nerves, how many pairs of coccygeal nerves are there?

A. 1
B. 5
C. 10
D. 12

Q.74 What is the major cell infected by the AIDS HIV Virus?

A. B lymphocyte
B. T lymphocytes
C. Cancer cells
D. Stem cells

Q.75 Enzyme that are integral part of ribosomes are involved in the synthesis of which of the following molecules?

A. Lipids
B. Proteins
C. Carbohydrates
D. All of these

Q.76 Skin colour in man is controlled by how many pairs of genes?

A. 1
B. 2
C. 3
D. None of these

Q.77 Embryo of a turtule, mouse and human show

A. Comparative embryology
B. Distinct differences
C. Vestigial organs
D. Analogous structure

Q.78 Monosynaptic refers to the presence of how many chemical synapse/s?

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

Q.79 Glycogen is how glucose is stored in the human body. Where is it most abundantly found?

A. Liver
B. Muscles
C. kidneys
D. Both A and B

Q.80 Catalysts that increase the rate of biological chemical reaction are called?

A. Proteins
B. Vitamines
C. Enzymes
D. Minerals

Q.81 The optimal pH in which the enzyme kinase functions is?

A. 1.5
B. 3.5
C. 5.5
D. 7.5

Q.82 The disease characterized by the breakdown of alveoli is called:

A. Asthma
B. Tuberculosis
C. Emphysema
D. A and B

Q.83 The dorsal root of spinal cord is:

A. Sensory
B. Motor
C. Mixed
D. All A, B and C are correct

Q.84 Darwin's Theory of evolution by natural selection is based on all of the following postulates except?

A. Some individuals are more successful in surviving and reproduction than others
B. Individuals within a population are variable
C. The survival and reproduction of individuals is not random
D. The survival and reproduction of individuals is random

Q.85 Most multicellular organisms are which of the following?

A. Haploid
B. Diploid
C. Single nucleus
D. None of these

Q.86 A plant cell wall is mainly composed of which of the following?

A. Protein
B. Lipid
C. Cellulose
D. Starch

Q.87 What is the definition of "fitness" in terms of evolution?

A. The organism's ability to attain resources while in competition with other organisms of its species
B. The organism's ability to attract the most mates
C. The organism's health
D. The ability of an organism to contribute its genes to future generations

Q.88 Which of the following statements is correct distinction between autotrophs and heterotrophs

A. Only heterotrophs require chemical compunds from the environment

B. Cellular respiration is unique to heterotrophs

Conly heterotrophs have mitochondria

D. Autotrophs but not heterotrophs can nurish themselves begining with nutrients that are entirely inorganic

Q.89 The fluid mosaic model of plasma membrane proposes that membranes are:

A. Solid B. Semi-solid

C. Fluid D. Liquid

Q.90 A gene pool is disturbed by which of the following?

A. Emigration B. Immigration

C. Pan migration D. Both A and B

Q.91 Which cells secrete pepsinogen?

A. Mucous B. Parietal

C. Zymogen D. Oxyntic

Q.92 How does the electron transport system generate ATP?

A. Symbiosis B. Chemiosmosis

C. Both a and b D. None of these

Q.93 Which of these processes is the means by which a bacterium can directly uptake and incorporate foreign DNA from the environment into its genome?

A. Transduction B. Transformation

C. Binary fission D. Conjugation

Q.94 Glottis is lined with:

A. Plasma membrane B. Mucous membrane

C. Meninges D. Epithelial membrane

Q.95 An insulin molecule is made up of how many polypeptide chains?

A. 4 B. 2

C. 3 D. 1

Q.96 Which product is formed when carbon dioxide combines with amino group of haemoglobin?

A. Carboxyhemoglobin B. Plasma proteins

C. Bicarbonate ions D. Histamines

Q.97 According to lock and key model the substrate acts as a?

A. Lock B. Key

C. Both a and b D. None of these

Q.98 How many thin filaments are arrayed around each thick filament within a sarcomere?

A. 2 B. 4

C. 6 D. 8

Q.99 The functional parts of forebrain are:

A. Thalamus and limbic system

B. Cerebrum, limbic system and thalamus

C. Thalamus and cerebrum

D. Cerebrum and limbic system

Q.100 Which of the following is NOT a function of Smooth Endoplasmic Reticulum (SER)?

A. Synthesis of steroid hormones from cholesterol.

B. Detoxification of harmful drugs.

C. Synthesis of phospholipids for plasma membrane.

D. Synthesis of membrane proteins.

Q.101 Which of the statements correctly describes why ions are unable to cross the plasma membrane without channel proteins?

A. They are unable to cross the hydrophilic phosphate heads of the lipid bilayer.

B. They are unable to cross the hydrophobic tails of the lipid bilayer.

C. They are unable to cross both the phosphate heads and fatty acid chains of the lipid bilayer.

D. They are too big to cross the plasma membrane.

Q.102 Identify the characteristic of acoelomates?

A. Absence of mesoderm

B. Absence of brain

C. Coelom that is incompletely lined with a mesoderm

D. Solid body without a cavity surrounding internal organs

Q.103 Nervous system of nematodes consists of which of the following?

A. Ventral nerve cord B. Dorsal nerve cord

C. Lateral nerve cord D. All of these

Q.104 Example of bacteria requiring low concentration of oxygen is?

A. Spirochete B. e coli

C. Pseudomonas D. Campylobacter

Q.105 Which among the following is a diploblastic organism?

A. Hydra B. Crabs

C. Squid D. Earthworm

Q.106 After fertilisation the zygote increases in size and travels down the Fallopian tube to become embedded in the walls of the womb. This process is called:

A. Ovulation B. Conception

C. Implantation D. Menstruation

Q.107 Inheritance in man is traced by which of the following?

A. Mathematical method B. Statistical method

C. Genetic method D. Pedigree method

Q.108 The main unit of the thick filament is:

A. Myofibril B. Z-line

C. Myosin D. Actin

Q.109 All of the following are the current preventive methods of HIV infection, except?

A. Safe and protected lifestyle

B. Use of sterile injections and needles

C. Use of available vaccines

D. Safe blood transfusion methods

Q.110 The hinge joint and ball and socket joints are the types of:

A. Freely movable joints B. Slightly movable joints

C. Immovable joints D. None of these

Q.111 For attachment, rabies virus binds to a

A. Complement receptor B. Integrin ICAM-1

C. Acetylcholin D. Epidermal growth factor

Q.112 Which of these is a characteristic of prokaryotic cells?

A. Absence of cell organelles B. Absence of nucleus

C. Presence of 70S ribosomes D. All of these

Q.113 A common polyhedral capsid shape of viruses is a?

A. Pentagon B. Cube

C. Icosahedron D. Pyramid

Q.114 Which of the following is NOT a characteristic feature of tapeworm?

A. Each body segment has two sets of male and female reproductive organs.

B. The digestive tract develops from endodermal cells in the embryo.

C. The body can be cut into two parts, which are mirror images of each other, in one plane only.

D. None of the above.

Q.115 HDL synthesized in ___

A. Adipose tissue

B. Liver

C. Intestine

D. Liver and intestine

Q.116 In Anaerobic respiration only _____ % of the energy present within the chemical bond of glucose is converted into ATP?

A. 1

B. 2

C. 3

D. 4

Q.117 The event happens in menstrual cycle when level of progesterone declines:

A. Ovulation

B. Beginning of menses

C. Corpus luteum formation

D. Maturation of ovarian follicle

Q.118 Metacarpophalangeal joints are examples of:

A. Saddle joint

B. Condyloid joint

C. Ball and socket joint

D. Hinge joint

Q.119 The Urey-Miller experiment determined which of the following results?

A. DNA replicates by semiconservative replication

B. Cyanobacteria were responsible for the oxygenation of the atmosphere

C. The early atmosphere was composed of ammonia and methane

D. Organic molecules can arise from inorganic precursors

Q.120 Growth and development of plant cells is the role of?

A. Parenchymatous cells

B. Chlorenchymatous cells

C. Meristematic cell

D. Sclerenchymatous cells

Q.121 The composition of brain stem is:

A. Spinal cord, axon, vertebra

B. Cerebrum, cerebellum, pons

C. Medula, pons, midbrain

D. Thalamus, midbrain, pons

Q.122 Which of the following is NOT an example of evidence supporting the endosymbiotic theory?

A. Mitochondria and other plastids multiply by binary fission.

B. Mitochondria contain their own DNA, which is a single circular chromosome.

C. Mitochondria have their own ribosomes, which are 70s.

D. None of these

Q.123 To form a female zygote, the sperm cell must contribute which chromosome?

A. X

B. 2X

C. Y

D. XY

Q.124 Your neighbor has a flower garden in which there are red flowers and white flowers. These flowers are diploid organisms, and flower color is an autosomal trait. The gene for red flowers (R) is dominant, while the gene for white flowers (r) is recessive. Which of the following could be the genotype of a red flower?

A. Rr

B. RR, Rr, or rr

C. rr

D. RR or Rr

Q.125 For step down transformer Ns _____ Np

A. Equal to (=) B. Less than (<)
C. Greater than (>) D. Not equal

Q.126 In series circuit, current remains?

A. Same B. Different
C. Sometimes same sometimes different D. None of them

Q.127 Identify the de Broglie expression from the following.

A. $\lambda = hxp$ B. $\lambda = h/p$
C. $\lambda = h+p$ D. $\lambda = h-p$

Q.128 Basically, a potentiometer is a device for

A. Comparing two voltages B. Measuring a current
C. Comparing two currents D. Measuring a voltage

Q.129 $\text{Cos}\theta = \phi/$

A. BA B. A
C. B D. B^2

Q.130 What does the constant N represent in the equation of state for an ideal gas PV = NkT?

A. Number of molecules of gas B. Number of moles of the gas
C. Number of nucleons D. Number of protons

Q.131 In a stationary wave, the distance between adjacent antinodes is equal to:

A. λ B. 2λ
C. $\lambda/2$ D. $\lambda/4$

Q.132 The presence of dielectric between two charged particles:

A. Reduces the electrostatic force B. Increases the electrostatic force
C. Does not change electrostatic force D. Doubles the electrostatic force

Q.133 A temperature of 162 C is equivalent to what temperature in kelvins?

A. -111 K B. 362 K
C. 425 K D. 111 K

Q.134 Which element has three isotopes?

A. H B. O
C. Cl D. None of these

Q.135 If the nuclear radius of Al^{27} is 3.6 fm, the approximate nuclear radius of Cu^{64} in fermi is

A. 1.2 gm B. 2.4 fm
C. 3.6 fm D. 4.8 fm

Q.136 Half wave rectifier uses

A. One diode B. Two diode
C. Three diodes D. Four diodes

Q.137 Lasers are produced by

A. Stimulated emission B. Spontaneous emission
C. Absorption D. All of these

Q.138 An electric filament bulb can be worked from

A. D.C. supply only B. A.C. supply only
C. Battery supply only D. All above

Q.139 If 110 J heat is added to the system and 40J work is done, then amount of work done is

A. 70J B. 150J
C. 190J D. 180J

Q.140 The existence of positron was discovered in the

A. Thermal radiation
B. Cosmic radiation
C. Electromagnetic radiation
D. Non-electromagnetic radiation

Q.141 An object moves 20 m in 5 sec. What is the gradient of the displacement-time graph?

A. 25
B. 15
C. 4
D. 1/4

Q.142 Equal masses of paraffin and water are mixed in a container of negligible thermal capacity. Initial temperature of water is 80°C and that of paraffin is 20°C. The final temperature of mixture is:

A. 70°C
B. 60°C
C. 50°C
D. 40°C

Q.143 What happens to the flux if applied magnetic field is doubled on the same surface?

A. Becomes half
B. Becomes twice
C. Becomes infinite
D. Becomes 4 times

Q.144 Under what conditions of temperature and pressure does a real gas approximate to an ideal gas?

A. Pressure = low temperature = low
B. Pressure = low temperature = high
C. Pressure = high temperature = low
D. Pressure = high temperature = high

Q.145 Centripetal acceleration always acts _____ the center

A. Away
B. Towards
C. Normally
D. Tangentially

Q.146 The photon is the particle, which has:

A. Infinite rest mass
B. Rest mass but no charge
C. No rest mass & no charge
D. A & C are correct

Q.147 Calculate the frequency of photon associated with 500 nm wavelength

A. 5 x 10^(14) Hz
B. 6 x 10^(14) Hz
C. 7 x 10^(14) Hz
D. 9 x 10^(14) Hz

Q.148 A body moving along the circumference of a circle completes two revolutions. If the radius of the circular path is R, the total angular displacement covered is?

A. πr
B. $2\pi r$
C. Zero
D. 4π

Q.149 Which of the following is the unit of mutual inductance?

A. VsA^{-2}
B. V^3sA^2
C. $V^2\ s$
D. VsA^{-1}

Q.150 What will happen in a time of 7 hours, if a radioactive substance has an average life of 7 hours?

A. Half of the active nuclei decay
B. Less half of the active nuclei decay
C. More than half of the active nuclei decay
D. All active nuclei decay

Q.151 Ampere's law is $\int B.dl =$

A. μI^2
B. μ/I
C. μI
D. $I\mu^2$

Q.152 In a standing wave, the distance between a node and consecutive anti-node is:

A. Equal to one wavelength
B. Equal to two wavelengths
C. Equal to half of wavelength
D. Equal to quarter of wavelength

Q.153 Transistors can be used as

A. Half wave rectifier
B. Full wave rectifier
C. Both
D. None of these

Q.154 At which angle work done is maximum

A. 45-degree
B. 90 degree
C. 0-degree
D. 180 degree

Q.155 Which of the following blocks will release heat fast?

A. Rough white surface
B. Polished white surface
C. Rough black surface
D. Polished black surface

Q.156 For clockwise rotations direction of angular velocity is

A. Positive
B. Negative
C. Zero
D. Infinite

Q.157 An adiabatic change is the one in which:

A. No heat is added to or taken out of a system
B. No change of temperature takes place
C. Boyle's law is applicable
D. Pressure and volume remains constant

Q.158 Which radiation is used in greenhouse effect?

A. UV
B. IR
C. X-rays
D. Gamma-rays

Q.159 What is the SI Unit of Potential difference?

A. Volts
B. Coulomb
C. Meter
D. Newton's

Q.160 A capacitor stores charge Q at a potential difference ΔV. What happens if the voltage applied to the capacitor by a battery is doubled to 2 ΔV?

A. The capacitance falls to half its initial value, and the charge remains the same
B. The capacitance and the charge both fall to half their initial values
C. The capacitance and the charge both double
D. The capacitance remains the same, and the charge Doubles

Q.161 For angular acceleration clockwise rotations means torque is

A. Positive
B. Negative
C. Zero
D. Infinite

Q.162 Superposition of two waves having same frequency, same amplitude and travelling in the opposite direction, is called:

A. Interference
B. Diffraction
C. Beats
D. Stationary waves

Q.163 The minimum charge on an object cannot be less than:

A. 1.6×10^{-19} C
B. 9×10^{9} C
C. 9.1×10^{-31} C
D. 1.6×10^{-27} C

Q.164 A full wave rectifier passes _____into positive cycles

A. Lower half cycle
B. Upper half cycle
C. Both cycles
D. None of them

Q.165 UV radiation is formed by bombarding gas molecules with

A. Electron
B. Protons
C. Alpha rays
D. Any of these

Q.166 The role of inductance is equivalent to:

A. Inertia
B. Force

C. Energy
D. Momentum

Q.167 e/m ratio for a electron in electric and magnetic field is

A. e/m =B^ r/E
B. E/(B^2r)
C. E^2/rB^2
D. B^2/Er

Q.168 A body at temperature T radiates heat according to relation

A. T^{-2}
B. T^{4}
C. T^{-4}
D. None of these

Q.169 In a rectifier, larger the value of shunt capacitor filter

A. Larger the peak-to-peak value of ripple voltage
B. Larger the peak current in the rectifying diode
C. Longer the time that current pulse flows through the diode
D. Smaller the dc voltage across the load

Q.170 A sound wave has a wavelength of 0.20 m. What is the phase difference between two points along the wave which are 0.65 m apart?

A. 0°
B. 45°
C. 90°
D. 180°

Q.171 A 220 V main supply is connected to a resistance of 100 k ohms. The effective current is

A. 2.2 Ma
B. $\frac{2.2}{\sqrt{2}}$ mA
C. $2.2 \times \sqrt{2}$ mA
D. None of the above

Q.172 Oil droplets of mass m and charge q are dropped between two horizontal parallel plates. Air resistance is negligible. The droplets are falling at constant velocity when electric field strength between the plates is E. Which of the following is true?

A. E=0
B. E < mg / q
C. E = mg / q
D. E > mg / q

Q.173 The X-ray photon is uncertain when it is

A. Emitted
B. Absorbed
C. Traveling
D. All of these

Q.174 A force F = (0.5x +10) N acts on a particle, calculate the work done by the force in displacing particle from x=0 to x=2 m

A. 20 J
B. 21 J
C. 22 J
D. 23 J

Q.175 A stationary wave is setup on a string which is fixed at both ends. The frequency of the wave is 400 Hz. If the speed of wave is 480 m/s, then what is the length of the string?

A. 1.2 m
B. 0.84 m
C. 0.60 m
D. 0.42 m

Q.176 The ionization power of ____ ray is highest

A. Beta
B. Gama
C. He-Ne laser
D. None of these

Q.177 Calculate the time taken for the charges to complete the circuit if the total charges were 5000 Coulomb and the current of the circuit was 20 Amp?

A. 250 seconds
B. 350 seconds
C. 400 seconds
D. 500 seconds

Q.178 Instantaneous velocity for a displacement function d(t)= 2-2t at any time is given by

A. -2t
B. 2t
C. 2
D. -2

Q.179 During an adiabatic process pressure of gas is found to be proportional to the cube of its temperature. The ratio of Cp/Cv is

A. 2
B. 44319
C. 44257
D. 44289

Q.180 The angular acceleration has units

A. rad/sec
B. sec/rad
C. sec^2
D. None of these

ENGLISH

Q.181 Aslam and his friends were making too much noise. Their father got really _____ at them.

A. Afraid
B. Angry
C. Kind
D. Strong

Q.182 _____ anyone _____ a pencil I could borrow?

A. Do... have
B. Does.. have
C. Do.. has
D. Does.. has

Q.183 Choose the correct sentence.

A. Dr Hussain works at city hospital in gulberg.
B. Dr Hussain works at City Hospital in Gulberg?
C. Dr Hussain works at City Hospital in Gulberg.
D. Dr Hussain works at city hospital in Gulberg.

Q.184 I found this bangle while digging in the backyard. I don't know who it belonged to.

A. I found this bangle
B. while digging
C. in the back yard.
D. I don't know who it belonged to.

Q.185 What is your name?

A. Declarative
B. Imperative
C. Interrogative
D. Exclamatory

Q.186 Children usually _____ a noise.

A. Made
B. Makes
C. Are making
D. Make

Q.187 Most of the milk _____ gone bad. Six gallons of milk _____ still in the refrigerator.

A. has... are
B. have.. is
C. has.. is
D. have ... are

Q.188 Choose the correct spelling of the word

A. Doen
B. Dun
C. Don
D. Done

Q.189 Choose the correct sentence.

A. After class, but before lunch, I went jogging.
B. After class, but before lunch I went jogging.
C. After class but before lunch, I went jogging.
D. After class, but before lunch, I went jogging!

Q.190 In most countries, children start primary school _____ the age of six.

A. in
B. on
C. at
D. to

Q.191 Which brand do you _____, Honda or Toyota?

A. Rather
B. Eat
C. Prefer
D. Wear

Q.192 Rectify

A. Correct
B. Preserve
C. Repeat
D. Justify

Q.193 The baby cried most of _____ night.

A. a
B. an
C. the
D. no article

Q.194 I would love to be able to swim if I am not afraid of water.

AI would love
B. To be able to swim
C. If I am not afraid
D. Of water.

Q.195 Which verb is NOT in the future tense?

A. He will go
B. He will eat
C. He will work
D. He eats

Q.196 Find the error?

A. It has not rained since April.
B. The jurors walked solemnly into the room.
C. Had we known, we would not have come.
D. No mistakes

Q.197 Not only the students but also their instructor _____ been called to the principal's office.

A. Has
B. Have
C. Were
D. was

Q.198 Choose the correct sentence.

A. Mr. and Mrs. Jalal stated, "We refuse to use the elevator because of mechanical problems!"
B. Mr. and Mrs. jalal stated, "we refuse to use the elevator because of mechanical problems."
C. Mr. and Mrs. Jalal stated, "We refuse to use the elevator because of mechanical problems."
D. Mr. and Mrs. Jalal stated we refuse to use the elevator because of mechanical problems.

Q.199 Who is _____ lady in _____ picture?

A. the... an
B. a.. the
C. the... a
D. the... the

Q.200 Choose the correct spelling of the word

A. Aniversary
B. Anniversery
C. Anniversary
D. Aniversry

LOGICAL REASONING

Q.201 Fact 1: Ayesha said Hamza and I both have cats
Fact 2: Hamza said I don't have a cat
Fact 3: Ayesha always tells the truth but hamza sometimes lies
If the above three statements are facts than which of the following statement will also be a fact
I. Ayesha has a cat
II. Hamza has a cat
III. Hamza is lying
IV. All the statements are the facts

A. Only 1
B. Only II
C. Only III
D. Statement 4

Q.202 Statement:

There has been an unprecedented increase in the number of successful candidates in this year's School Leaving Certificate Examination.

COURSE OF ACTION:

I. The government should make arrangements to increase number of seats of intermediate courses in existing colleges.

II. The government should take active steps to open new colleges to accommodate all these successful candidates.

A. Both of them follows
B. None of them follows
C. Only I follow
D. Only II follows

Q.203 Statements

I. She topped in her collage

II. She is hard-working

A. Both statements are of some common cause
B. Statement 1 is the cause then 2 is its effect
C. Statement 2 is the cause then 1 is its effect.
D. Both of the statements are effect of independent causes

Q.204 Statement:

The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has been decreased.

COURSE OF ACTION:

I. To help the indigenous producers of fruits, the Government should impose high import duty on these fruits, even if these are not of good quality.

II. The fruit vendors should stop selling imported fruits. So that the demand for indigenous fruits would be increased.

A. Both of them follows
B. None of them follows
C. Only I follows
D. Only II follows

Q.205 What should come next to Confound, Illiterate, Bewilder,…?

A. Kind
B. Unlearned
C. Normal
D. Disable

Q.206 First step in graphing linear equation is to

A. Connect two points
B. Extend straight line
C. Identify and plot coordinates
D. Both A and B

Q.207 Complete the series ACD, AGD, AJD,_?

A. ABD
B. ATD
C. AND
D. AMD

Q.208 What was the name of Imam Bukhari (R.A)?

A. Muhammad bin Ismail
B. Muhammad Ismail
C. Muhammad Ibrahim
D. Both A and B

Q.209 If '-' means '+', '+' means '-', '×' means '÷' and '÷' means '×' then which of the following will be the correct equation?

A. 30 + 5 + 14 - 10 × 15 = 122
B. 10 + 5 - 14 ÷ 10 × 15 = 158
C. 30 - 5 + 14 ÷ 10 × 15 = 162
D. 30 × 5 - 4 ÷ 10 + 15 = 31

Q.210 Complete the series A3.3, B6.6, C9.9, _____?

A. D13.4
B. D13.2
C. D13.1
D. D13.2

As we know there is lot of mistakes in answer keys of PMC Practice tests, so I have decided to rectify all in proper in SKN STUDY GROUP

PMC PRACTICE TEST 07

CHEMISTRY

Q.1 **A mole of a substance contains _____particles**

A. 6.2×10^{22} B. 6.22×10^{22}

C. 6.02×10^{23} D. 6.5×10^{22}

Q.2 **Which alkali metal only combine with Nitrogen?**

A. Li B. Fr

C. Cs D. K

Q.3 **The elements having partially filled d and f orbitals are called as_____?**

A. Transition elements B. d-Block elements

C. f-block elements D. All of these

Q.4 **When sudden expansion of gases takes place, cooling occurs. This is called**

A. freezing effect B. Joule Thomson effect

C. Boyles effect D. J.Perrin effect

Q.5 **The presence of several fine lines in line spectrum shows the presence of**

A. Shells B. Energy levels

C. Sub shells D. All of these

Q.6 **In which phase SN_2 reactions are favored?**

A. Solid B. Liquid

C. Gas D. All of these

Q.7 **How many resonance structures of benzene are possible?**

A. 2 B. 3

C. 6 D. 4

Q.8 **Aldol condensation takes place in the presence of ____?**

A. H_2SO_4 B. $K_2Cr_2O_7$

C. NaOH D. $H_2O/H+$

Q.9 **In Ion Electron Method of Balancing, equations are**

A. Written with Oxidation numbers of Constituents

B. Split into two half reactions

C. Only oxidation part is written

D. Only Reducing part is written

Q.10 **Enthalpy change of solution of Na_2CO_3 is a _____reaction?**

A. Exothermic reaction B. Endothermic reaction

C. Spontaneous reaction D. Nonspontaneous reaction

Q.11 **In aluminum oxide, ions are present in the ratio 2:3, its formula in**

A. AlO B. Al_2O

C. Al_2O_3 D. Al_3O_2

Q.12 **Phenol is also called as?**

A. Carbonic acid B. Carbolic acid

C. Acetic acid D. Hydroxy acid

Q.13 **Alkyl iodides cannot be prepared directly by the halogenation of alkanes because?**

A. Iodine reacts slowly

B. Iodine reacts reversibly

C. HI formed reduces alkyl iodide again to starting material

D. All of these

Q.14 **Who introduce the concept of macromolecules?**

A. Runge B. Max Well

C. Staudinger D. None of these

Q.15 If a double bond is present between two carbons then this class of compounds in called as_____?

A. Alkanes
B. Alkynes
C. Carbonyl
D. Alkenes

Q.16 Which of the following Compound is not reduced by $NaBH_4$?

A. Acetaldehyde
B. Acetone
C. Carboxylic acid
D. Alkene

Q.17 Equilibrium constant has

A. Units
B. No Units
C. Both A and B
D. A negative value

Q.18 NaOH is named as caustic soda because

A. It corrodes the organic tissues
B. It is used in soda water
C. It reacts with chlorine gas
D. It reacts with fats to form soap

Q.19 Acetaldehyde oxidation will lead to formation of

A. Acetic acid
B. Butanoic acid
C. Propanoic acid
D. Ester

Q.20 At 0°C what is the physical state of water?

A. Ice
B. Liquid
C. Vapour
D. Both ice and liquid

Q.21 Acyclic hydrocarbons are also called as_____?

A. Closed chain hydrocarbons
B. Open chain hydrocarbons
C. Ring compounds
D. Alicyclic compounds

Q.22 How many molecules of H_2 adds in acetylene to form ethane?

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

Q.23 Rate of reaction has

A. No units
B. Unit of Moles/dm^3
C. Unit as Moles / litre
D. Unit as Moles/dm^3s^{-1}

Q.24 Nitrogen N_2 has ____number of electrons, protons and neutrons

A. 7,8,9
B. 7,7,7
C. 14,14,14
D. 14,14,15

Q.25 Proteins also contain bonding

A. Covalent
B. Ionic
C. Hydrogen
D. Metallic

Q.26 Energy in formation of a crystal lattice is

A. Absorbed
B. Released
C. Dependent on Crystal Size
D. None of these

Q.27 Enthalpy is the sum of internal energy

A. Work done
B. Entropy
C. Potential Energy
D. Kinetic Energy

Q.28 Human body contains _____kind of proteins?

A. 60000
B. Almost 10000
C. 5000
D. 200

Q.29 The arrangement of sub shells or orbitals is according to _____ rule

A. 2(l+1)
B. l+1
C. n+l
D. 2(n+l)

Q.30 In non-polar molecules, the strength of London forces depends on number of

A. Moles
B. Molecules
C. Atoms
D. All of these

Q.31 Atomic radii can be determined by measuring the distance b/w centers of ____atoms

A. Opposite
B. Adjacent
C. Parallel
D. Equal

Q.32 An atom is composed of electrons, protons, neutrons and

A. Hyprone
B. Neutrino
C. Anti-neutrino
D. All of these

Q.33 Which of the following is typical transition metal?

A. Sc
B. Y
C. Cd
D. Co

Q.34 The reaction in which a molecule is removed from a compound but no addition takes place is called as_____?

A. Substitution reaction
B. Elimination reaction
C. Addition reaction
D. Replacement reaction

Q.35 Tautomerism involves the transfer of_____?

A. Electron
B. Carbon atom
C. Functional group
D. H−atom

Q.36 Which of the following catalyst is used for the preparation of acidic anhydrides?

A. $K_2Cr_2O_7$
B. P_2O_5
C. $H+/H_2O$
D. H_2SO_4

Q.37 Which of the following compound shows strong H−Bonding with water?

A. C_2H_6
B. CH_3Br
C. CH_3OCH_3
D. C_2H_5OH

Q.38 Spectrometry is used when reactants and products absorb

A. Ultraviolet radiations
B. Visible radiation
C. Infrared radiation
D. All of these

Q.39 Which of the following reaction is used to locate the position of double bond in the compound?

A. Dehydration
B. Ozonolysis
C. MarkovniKov's addition
D. Oxidation with $KMnO_4$

Q.40 Which of the following compound is present in camphor and menthone?

A. Aldehyde
B. Alcohol
C. Esters
D. Ketones

Q.41 In a galvanic cell Copper compartment get net negative charge due to arrival of

A. Free charge from zinc sulphate solution
B. Electron
C. Protons
D. Zinc Ions

Q.42 Heat absorbed by a substance at constant pressure is equal to__?

A. ΔG
B. ΔH
C. ΔE
D. $\Delta H-\Delta E$

Q.43 The last subshell of alkaline earth metals

A. 2s
B. 1s
C. 2d
D. 3d

Q.44 Phenol is _____liquid?

A. Dense
B. Hard
C. Deliquescent
D. Intermittent

Q.45 When two carboxylic acids are strongly heated in the presence of P_2O_5, which product is formed?

A. Acid halides
B. Dimer

C. Acid anhydride
D. None of these

Q.46 The enzyme which is used in treatment of cancer in children?

A. Thrombin
B. L- asparaginase
C. Both
D. None of these

Q.47 At which temperature water has maximum density?

A. 2°C
B. 4°C
C. 0°C
D. <0°C

Q.48 The sum of mole fraction of the gases in a mixture of gases is

A. Always greater than 1
B. Always smaller than 1
C. May be equal or less than 1
D. Always 1

Q.49 At equilibrium if the concentration of product is increased reaction will proceed to

A. Forward Direction
B. Backward Direction
C. Remain Undisturbed
D. None of these

Q.50 Change in volume of a system depends only upon

A. Initial conditions
B. Final Conditions
C. Initial and final conditions
D. Path of the reaction

Q.51 According to_____ theory, atoms were the ultimate particles that cannot be divided further.

A. Bohr's
B. Rutherford's
C. Dalton's
D. Cannizzaro's

Q.52 If 9.8 g of sulfuric acid dissolved in excess quantity of water, it will yield _____moles of hydrogen ion (H^+) and _____mole of sulphate ions (SO_4^{-2})

A. 0.1, 0.2
B. 0.1, 0.3
C. 0.2, 0.4
D. 0.2,0.1

Q.53 lanthanides and actinides resemble in?

A. Ionization state
B. Oxidation state
C. Electronic configuration
D. Formation of complexes

Q.54 For balancing oxygen and hydrogen atoms in acids or neutral solutions

A. Water can be added
B. H+ ions can be added
C. Both A and B
D. OH^- ions can be added

Q.55 Organic compounds are

A. Ionic
B. Non ionic
C. Non covalent
D. Covalent

Q.56 All the three axes and three angles are of unequal length and none of the angle is 90°

A. Cubic system
B. Triclinic system
C. Tetragonal system
D. Monoclinic system

BIOLOGY

Q.57 Choose the region/s of spinal cord:

A. Cervical
B. Thoracic
C. Lumbar
D. All of these

Q.58 Which of the following is not the function of endoplasmic reticulum?

A. Transport of material
B. Mechanical support
C. Synthesis of conjugated molecules
D. All of these

Q.59 Centipedes belong to class _____ of arthropoda.

A. Arachnida
B. Insecta
C. Cephalopoda
D. Myriapoda

Q.60 What is the strengthening material of the prokaryotic cell wall?

A. Cellulose
B. Chitin
C. Silica waxes and lignin
D. Peptidoglycan or murein

Q.61 Which one is not the characteristic of Kingdom Animalia?

A. All animals are ingestive heterotrophs
B. All animals are eukaryotes
C. It is largest kingdom
D. All animals develop from the dissimilar gametes

Q.62 Sperms of liverworts, mosses, ferns move towards archegonia, in response to nucleic acid released by the ovum. This is an example of?

A. Chemotropic movement
B. Chemonastic movement
C. Haptonastic movement
D. Chemotactic movement

Q.63 Adaptation of traits to better fill a niche is known as which of the following?

A. Polymorphism
B. Gene linkage
C. Specialization
D. Replication

Q.64 Coccobacillus has a shape similar to which of the following?

A. Egg
B. Rod
C. Ball
D. None of these

Q.65 Compound Microscope was first used by

A. A.V. Leeuwenhoek
B. Pasteur
C. Janssen and Hans
D. None of these

Q.66 Nicotinamide adenine dinucleotide is an example of:

A. Coenzyme
B. Holoenzyme
C. Cofactor
D. Apoenzyme

Q.67 The loss of liquid via the hydathodes is called:

A. Ascent of sap
B. Plasmolysis
C. Imbibition
D. Guttation

Q.68 Herpes simplexes is caused by which virus?

A. Adenovirus
B. Pox virus
C. Influenza Virus
D. Herpes virus

Q.69 Two species can avoid competition, and better use the environment's resources by occupying different?

A. Adaptations
B. Polymorphism
C. Niches
D. Specialization

Q.70 Glycolysis takes place in?

A. Nucleus
B. Cytosol
C. Mitochondria
D. Ribosomes

Q.71 The pleural membranes cover which organ?

A. Kidney
B. Heart
C. Brain
D. Lungs

Q.72 Which method is of asexual reproduction?

A. Sporulation
B. Fission
C. Apomixis
D. All of these

Q.73 Out of 31 pairs of spinal nerves, how many pairs of coccygeal nerves are there?

A. 1
B. 5
C. 10
D. 12

Q.74 What is the major cell infected by the AIDS HIV Virus?

A. B lymphocyte
B. T lymphocytes
C. Cancer cells
D. Stem cells

Q.75 Enzyme that are integral part of ribosomes are involved in the synthesis of which of the following molecules?

A. Lipids
B. Proteins
C. Carbohydrates
D. All of these

Q.76 Skin colour in man is controlled by how many pairs of genes?

A. 1
B. 2
C. 3
D. None of these

Q.77 Embryo of a turtule, mouse and human show

A. Comparative embryology
B. Distinct differences
C. Vestigial organs
D. Analogous structure

Q.78 Monosynaptic refers to the presence of how many chemical synapse/s?

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

Q.79 Glycogen is how glucose is stored in the human body. Where is it most abundantly found?

A. Liver
B. Muscles
C. kidneys
D. Both A and B

Q.80 Catalysts that increase the rate of biological chemical reaction are called?

A. Proteins
B. Vitamines
C. Enzymes
D. Minerals

Q.81 The optimal pH in which the enzyme kinase functions is?

A. 1.5
B. 3.5
C. 5.5
D. 7.5

Q.82 The disease characterized by the breakdown of alveoli is called:

A. Asthma
B. Tuberculosis
C. Emphysema
D. A and B

Q.83 The dorsal root of spinal cord is:

A. Sensory
B. Motor
C. Mixed
D. All A, B and C are correct

Q.84 Darwin's Theory of evolution by natural selection is based on all of the following postulates except?

A. Some individuals are more successful in surviving and reproduction than others
B. Individuals within a population are variable
C. The survival and reproduction of individuals is not random
D. The survival and reproduction of individuals is random

Q.85 Most multicellular organisms are which of the following?

A. Haploid
B. Diploid
C. Single nucleus
D. None of these

Q.86 A plant cell wall is mainly composed of which of the following?

A. Protein
B. Lipid
C. Cellulose
D. Starch

Q.87 What is the definition of "fitness" in terms of evolution?

A. The organism's ability to attain resources while in competition with other organisms of its species
B. The organism's ability to attract the most mates
C. The organism's health
D. The ability of an organism to contribute its genes to future generations

Q.88 Which of the following statements is correct distinction between autotrophs and heterotrophs

A. Only heterotrophs require chemical compunds from the environment

B. Cellular respiration is unique to heterotrophs

Conly heterotrophs have mitochondria

D. Autotrophs but not heterotrophs can nurish themselves begining with nutrients that are entirely inorganic

Q.89 The fluid mosaic model of plasma membrane proposes that membranes are:

A. Solid

B. Semi-solid

C. Fluid

D. Liquid

Q.90 A gene pool is disturbed by which of the following?

A. Emigration

B. Immigration

C. Pan migration

D. Both A and B

Q.91 Which cells secrete pepsinogen?

A. Mucous

B. Parietal

C. Zymogen

D. Oxyntic

Q.92 How does the electron transport system generate ATP?

A. Symbiosis

B. Chemiosmosis

C. Both a and b

D. None of these

Q.93 Which of these processes is the means by which a bacterium can directly uptake and incorporate foreign DNA from the environment into its genome?

A. Transduction

B. Transformation

C. Binary fission

D. Conjugation

Q.94 Glottis is lined with:

A. Plasma membrane

B. Mucous membrane

C. Meninges

D. Epithelial membrane

Q.95 An insulin molecule is made up of how many polypeptide chains?

A. 4

B. 2

C. 3

D. 1

Q.96 Which product is formed when carbon dioxide combines with amino group of haemoglobin?

A. Carboxyhemoglobin

B. Plasma proteins

C. Bicarbonate ions

D. Histamines

Q.97 According to lock and key model the substrate acts as a?

A. Lock

B. Key

C. Both a and b

D. None of these

Q.98 How many thin filaments are arrayed around each thick filament within a sarcomere?

A. 2

B. 4

C. 6

D. 8

Q.99 The functional parts of forebrain are:

A. Thalamus and limbic system

B. Cerebrum, limbic system and thalamus

C. Thalamus and cerebrum

D. Cerebrum and limbic system

Q.100 Which of the following is NOT a function of Smooth Endoplasmic Reticulum (SER)?

A. Synthesis of steroid hormones from cholesterol.

B. Detoxification of harmful drugs.

C. Synthesis of phospholipids for plasma membrane.

D. Synthesis of membrane proteins.

Q.101 Which of the statements correctly describes why ions are unable to cross the plasma membrane without channel proteins?

A. They are unable to cross the hydrophilic phosphate heads of the lipid bilayer.

B. They are unable to cross the hydrophobic tails of the lipid bilayer.

C. They are unable to cross both the phosphate heads and fatty acid chains of the lipid bilayer.

D. They are too big to cross the plasma membrane.

Q.102 Identify the characteristic of acoelomates?

A. Absence of mesoderm

B. Absence of brain

C. Coelom that is incompletely lined with a mesoderm

D. Solid body without a cavity surrounding internal organs

Q.103 Nervous system of nematodes consists of which of the following?

A. Ventral nerve cord

B. Dorsal nerve cord

C. Lateral nerve cord

D. All of these

Q.104 Example of bacteria requiring low concentration of oxygen is?

A. Spirochete

B. e coli

C. Pseudomonas

D. Campylobacter

Q.105 Which among the following is a diploblastic organism?

A. Hydra

B. Crabs

C. Squid

D. Earthworm

Q.106 After fertilisation the zygote increases in size and travels down the Fallopian tube to become embedded in the walls of the womb. This process is called:

A. Ovulation

B. Conception

C. Implantation

D. Menstruation

Q.107 Inheritance in man is traced by which of the following?

A. Mathematical method

B. Statistical method

C. Genetic method

D. Pedigree method

Q.108 The main unit of the thick filament is:

A. Myofibril

B. Z-line

C. Myosin

D. Actin

Q.109 All of the following are the current preventive methods of HIV infection, except?

A. Safe and protected lifestyle

B. Use of sterile injections and needles

C. Use of available vaccines

D. Safe blood transfusion methods

Q.110 The hinge joint and ball and socket joints are the types of:

A. Freely movable joints

B. Slightly movable joints

C. Immovable joints

D. None of these

Q.111 For attachment, rabies virus binds to a

A. Complement receptor

B. Integrin ICAM-1

C. Acetylcholin

D. Epidermal growth factor

Q.112 Which of these is a characteristic of prokaryotic cells?

A. Absence of cell organelles

B. Absence of nucleus

C. Presence of 70S ribosomes

D. All of these

Q.113 A common polyhedral capsid shape of viruses is a?

A. Pentagon

B. Cube

C. Icosahedron

D. Pyramid

Q.114 Which of the following is NOT a characteristic feature of tapeworm?

A. Each body segment has two sets of male and female reproductive organs.

B. The digestive tract develops from endodermal cells in the embryo.

C. The body can be cut into two parts, which are mirror images of each other, in one plane only.

D. None of the above.

Q.115 HDL synthesized in ___

A. Adipose tissue

B. Liver

C. Intestine

D. Liver and intestine

Q.116 In Anaerobic respiration only _____ % of the energy present within the chemical bond of glucose is converted into ATP?

A. 1

B. 2

C. 3

D. 4

Q.117 The event happens in menstrual cycle when level of progesterone declines:

A. Ovulation

B. Beginning of menses

C. Corpus luteum formation

D. Maturation of ovarian follicle

Q.118 Metacarpophalangeal joints are examples of:

A. Saddle joint

B. Condyloid joint

C. Ball and socket joint

D. Hinge joint

Q.119 The Urey-Miller experiment determined which of the following results?

A. DNA replicates by semiconservative replication

B. Cyanobacteria were responsible for the oxygenation of the atmosphere

C. The early atmosphere was composed of ammonia and methane

D. Organic molecules can arise from inorganic precursors

Q.120 Growth and development of plant cells is the role of?

A. Parenchymatous cells

B. Chlorenchymatous cells

C. Meristematic cell

D. Sclerenchymatous cells

Q.121 The composition of brain stem is:

A. Spinal cord, axon, vertebra

B. Cerebrum, cerebellum, pons

C. Medula, pons, midbrain

D. Thalamus, midbrain, pons

Q.122 Which of the following is NOT an example of evidence supporting the endosymbiotic theory?

A. Mitochondria and other plastids multiply by binary fission.

B. Mitochondria contain their own DNA, which is a single circular chromosome.

C. Mitochondria have their own ribosomes, which are 70s.

D. None of these

Q.123 To form a female zygote, the sperm cell must contribute which chromosome?

A. X

B. 2X

C. Y

D. XY

Q.124 Your neighbor has a flower garden in which there are red flowers and white flowers. These flowers are diploid organisms, and flower color is an autosomal trait. The gene for red flowers (R) is dominant, while the gene for white flowers (r) is recessive. Which of the following could be the genotype of a red flower?

A. Rr

B. RR, Rr, or rr

C. rr

D. RR or Rr

Q.125 For step down transformer Ns _____ Np

A. Equal to (=) B. Less than (<)

C. Greater than (>) D. Not equal

Q.126 In series circuit, current remains?

A. Same B. Different

C. Sometimes same sometimes different D. None of them

Q.127 Identify the de Broglie expression from the following.

A. $\lambda = hxp$ B. $\lambda = h/p$

C. $\lambda = h+p$ D. $\lambda = h-p$

Q.128 Basically, a potentiometer is a device for

A. Comparing two voltages B. Measuring a current

C. Comparing two currents D. Measuring a voltage

Q.129 $\text{Cos}\theta = \phi/$

A. BA B. A

C. B D. B^2

Q.130 What does the constant N represent in the equation of state for an ideal gas PV = NkT?

A. Number of molecules of gas B. Number of moles of the gas

C. Number of nucleons D. Number of protons

Q.131 In a stationary wave, the distance between adjacent antinodes is equal to:

A. λ B. 2λ

C. $\lambda/2$ D. $\lambda/4$

Q.132 The presence of dielectric between two charged particles:

A. Reduces the electrostatic force B. Increases the electrostatic force

C. Does not change electrostatic force D. Doubles the electrostatic force

Q.133 A temperature of 162 C is equivalent to what temperature in kelvins?

A. -111 K B. 362 K

C. 425 K D. 111 K

Q.134 Which element has three isotopes?

A. H B. O

C. Cl D. None of these

Q.135 If the nuclear radius of Al^{27} is 3.6 fm, the approximate nuclear radius of Cu^{64} in fermi is

A. 1.2 gm B. 2.4 fm

C. 3.6 fm D. 4.8 fm

Q.136 Half wave rectifier uses

A. One diode B. Two diode

C. Three diodes D. Four diodes

Q.137 Lasers are produced by

A. Stimulated emission B. Spontaneous emission

C. Absorption D. All of these

Q.138 An electric filament bulb can be worked from

A. D.C. supply only B. A.C. supply only

C. Battery supply only D. All above

Q.139 If 110 J heat is added to the system and 40J work is done, then amount of work done is

A. 70J B. 150J

C. 190J D. 180J

Q.140 The existence of positron was discovered in the

A. Thermal radiation
B. Cosmic radiation
C. Electromagnetic radiation
D. Non-electromagnetic radiation

Q.141 An object moves 20 m in 5 sec. What is the gradient of the displacement-time graph?

A. 25
B. 15
C. 4
D. 1/4

Q.142 Equal masses of paraffin and water are mixed in a container of negligible thermal capacity. Initial temperature of water is 80°C and that of paraffin is 20°C. The final temperature of mixture is:

A. 70°C
B. 60°C
C. 50°C
D. 40°C

Q.143 What happens to the flux if applied magnetic field is doubled on the same surface?

A. Becomes half
B. Becomes twice
C. Becomes infinite
D. Becomes 4 times

Q.144 Under what conditions of temperature and pressure does a real gas approximate to an ideal gas?

A. Pressure = low temperature = low
B. Pressure = low temperature = high
C. Pressure = high temperature = low
D. Pressure = high temperature = high

Q.145 Centripetal acceleration always acts _____ the center

A. Away
B. Towards
C. Normally
D. Tangentially

Q.146 The photon is the particle, which has:

A. Infinite rest mass
B. Rest mass but no charge
C. No rest mass & no charge
D. A & C are correct

Q.147 Calculate the frequency of photon associated with 500 nm wavelength

A. 5 x 10^(14) Hz
B. 6 x 10^(14) Hz
C. 7 x 10^(14) Hz
D. 9 x 10^(14) Hz

Q.148 A body moving along the circumference of a circle completes two revolutions. If the radius of the circular path is R, the total angular displacement covered is?

A. πr
B. $2\pi r$
C. Zero
D. 4π

Q.149 Which of the following is the unit of mutual inductance?

A. VsA^{-2}
B. V^3sA^2
C. $V^2 s$
D. VsA^{-1}

Q.150 What will happen in a time of 7 hours, if a radioactive substance has an average life of 7 hours?

A. Half of the active nuclei decay
B. Less half of the active nuclei decay
C. More than half of the active nuclei decay
D. All active nuclei decay

Q.151 Ampere's law is $\int B.dl =$

A. μI^2
B. μ/I
C. μI
D. $I\mu^2$

Q.152 In a standing wave, the distance between a node and consecutive anti-node is:

A. Equal to one wavelength
B. Equal to two wavelengths
C. Equal to half of wavelength
D. Equal to quarter of wavelength

Q.153 Transistors can be used as

A. Half wave rectifier
B. Full wave rectifier
C. Both
D. None of these

Q.154 At which angle work done is maximum

A. 45-degree
B. 90 degree
C. 0-degree
D. 180 degree

Q.155 Which of the following blocks will release heat fast?

A. Rough white surface
B. Polished white surface
C. Rough black surface
D. Polished black surface

Q.156 For clockwise rotations direction of angular velocity is

A. Positive
B. Negative
C. Zero
D. Infinite

Q.157 An adiabatic change is the one in which:

A. No heat is added to or taken out of a system
B. No change of temperature takes place
C. Boyle's law is applicable
D. Pressure and volume remains constant

Q.158 Which radiation is used in greenhouse effect?

A. UV
B. IR
C. X-rays
D. Gamma-rays

Q.159 What is the SI Unit of Potential difference?

A. Volts
B. Coulomb
C. Meter
D. Newton's

Q.160 A capacitor stores charge Q at a potential difference ΔV. What happens if the voltage applied to the capacitor by a battery is doubled to 2 ΔV?

A. The capacitance falls to half its initial value, and the charge remains the same
B. The capacitance and the charge both fall to half their initial values
C. The capacitance and the charge both double
D. The capacitance remains the same, and the charge Doubles

Q.161 For angular acceleration clockwise rotations means torque is

A. Positive
B. Negative
C. Zero
D. Infinite

Q.162 Superposition of two waves having same frequency, same amplitude and travelling in the opposite direction, is called:

A. Interference
B. Diffraction
C. Beats
D. Stationary waves

Q.163 The minimum charge on an object cannot be less than:

A. 1.6×10^{-19} C
B. 9×10^{9} C
C. 9.1×10^{-31} C
D. 1.6×10^{-27} C

Q.164 A full wave rectifier passes _____into positive cycles

A. Lower half cycle
B. Upper half cycle
C. Both cycles
D. None of them

Q.165 UV radiation is formed by bombarding gas molecules with

A. Electron
B. Protons
C. Alpha rays
D. Any of these

Q.166 The role of inductance is equivalent to:

A. Inertia
B. Force

C. Energy
D. Momentum

Q.167 e/m ratio for a electron in electric and magnetic field is

A. e/m =B^ r/E
B. E/(B^2r)
C. E^2/rB^2
D. B^2/Er

Q.168 A body at temperature T radiates heat according to relation

A. T^{-2}
B. T^4
C. T^{-4}
D. None of these

Q.169 In a rectifier, larger the value of shunt capacitor filter

A. Larger the peak-to-peak value of ripple voltage
B. Larger the peak current in the rectifying diode
C. Longer the time that current pulse flows through the diode
D. Smaller the dc voltage across the load

Q.170 A sound wave has a wavelength of 0.20 m. What is the phase difference between two points along the wave which are 0.65 m apart?

A. 0°
B. 45°
C. 90°
D. 180°

Q.171 A 220 V main supply is connected to a resistance of 100 k ohms. The effective current is

A. 2.2 Ma
B. $\frac{2.2}{\sqrt{2}}$ mA
C. $2.2 \times \sqrt{2}$ mA
D. None of the above

Q.172 Oil droplets of mass m and charge q are dropped between two horizontal parallel plates. Air resistance is negligible. The droplets are falling at constant velocity when electric field strength between the plates is E. Which of the following is true?

A. E=0
B. E < mg / q
C. E = mg / q
D. E > mg / q

Q.173 The X-ray photon is uncertain when it is

A. Emitted
B. Absorbed
C. Traveling
D. All of these

Q.174 A force F = (0.5x +10) N acts on a particle, calculate the work done by the force in displacing particle from x=0 to x=2 m

A. 20 J
B. 21 J
C. 22 J
D. 23 J

Q.175 A stationary wave is setup on a string which is fixed at both ends. The frequency of the wave is 400 Hz. If the speed of wave is 480 m/s, then what is the length of the string?

A. 1.2 m
B. 0.84 m
C. 0.60 m
D. 0.42 m

Q.176 The ionization power of ____ ray is highest

A. Beta
B. Gama
C. He-Ne laser
D. None of these

Q.177 Calculate the time taken for the charges to complete the circuit if the total charges were 5000 Coulomb and the current of the circuit was 20 Amp?

A. 250 seconds
B. 350 seconds
C. 400 seconds
D. 500 seconds

Q.178 Instantaneous velocity for a displacement function d(t)= 2-2t at any time is given by

A. -2t
B. 2t
C. 2
D. -2

Q.179 During an adiabatic process pressure of gas is found to be proportional to the cube of its temperature. The ratio of Cp/Cv is

A. 2
B. 44319
C. 44257
D. 44289

Q.180 The angular acceleration has units

A. rad/sec
B. sec/rad
C. sec^2
D. None of these

ENGLISH

Q.181 Aslam and his friends were making too much noise. Their father got really _____ at them.

A. Afraid
B. Angry
C. Kind
D. Strong

Q.182 _____ anyone _____ a pencil I could borrow?

A. Do... have
B. Does.. have
C. Do.. has
D. Does.. has

Q.183 Choose the correct sentence.

A. Dr Hussain works at city hospital in gulberg.
B. Dr Hussain works at City Hospital in Gulberg?
C. Dr Hussain works at City Hospital in Gulberg.
D. Dr Hussain works at city hospital in Gulberg.

Q.184 I found this bangle while digging in the backyard. I don't know who it belonged to.

A. I found this bangle
B. while digging
C. in the back yard.
D. I don't know who it belonged to.

Q.185 What is your name?

A. Declarative
B. Imperative
C. Interrogative
D. Exclamatory

Q.186 Children usually _____ a noise.

A. Made
B. Makes
C. Are making
D. Make

Q.187 Most of the milk _____ gone bad. Six gallons of milk _____ still in the refrigerator.

A. has... are
B. have.. is
C. has.. is
D. have ... are

Q.188 Choose the correct spelling of the word

A. Doen
B. Dun
C. Don
D. Done

Q.189 Choose the correct sentence.

A. After class, but before lunch, I went jogging.
B. After class, but before lunch I went jogging.
C. After class but before lunch, I went jogging.
D. After class, but before lunch, I went jogging!

Q.190 In most countries, children start primary school _____ the age of six.

A. in
B. on
C. at
D. to

Q.191 Which brand do you _____, Honda or Toyota?

A. Rather
B. Eat
C. Prefer
D. Wear

Q.192 Rectify

A. Correct
B. Preserve
C. Repeat
D. Justify

Q.193 The baby cried most of _____ night.

A. a
B. an
C. the
D. no article

Q.194 I would love to be able to swim if I am not afraid of water.

AI would love
B. To be able to swim
C. If I am not afraid
D. Of water.

Q.195 Which verb is NOT in the future tense?

A. He will go
B. He will eat
C. He will work
D. He eats

Q.196 Find the error?

A. It has not rained since April.
B. The jurors walked solemnly into the room.
C. Had we known, we would not have come.
D. No mistakes

Q.197 Not only the students but also their instructor _____ been called to the principal's office.

A. Has
B. Have
C. Were
D. was

Q.198 Choose the correct sentence.

A. Mr. and Mrs. Jalal stated, "We refuse to use the elevator because of mechanical problems!"
B. Mr. and Mrs. jalal stated, "we refuse to use the elevator because of mechanical problems."
C. Mr. and Mrs. Jalal stated, "We refuse to use the elevator because of mechanical problems."
D. Mr. and Mrs. Jalal stated we refuse to use the elevator because of mechanical problems.

Q.199 Who is _____ lady in _____ picture?

A. the... an
B. a.. the
C. the... a
D. the... the

Q.200 Choose the correct spelling of the word

A. Aniversary
B. Anniversery
C. Anniversary
D. Aniversry

LOGICAL REASONING

Q.201 Fact 1: Ayesha said Hamza and I both have cats
Fact 2: Hamza said I don't have a cat
Fact 3: Ayesha always tells the truth but hamza sometimes lies
If the above three statements are facts than which of the following statement will also be a fact
I. Ayesha has a cat
II. Hamza has a cat
III. Hamza is lying
IV. All the statements are the facts

A. Only 1
B. Only II
C. Only III
D. Statement 4

Q.202 Statement:

There has been an unprecedented increase in the number of successful candidates in this year's School Leaving Certificate Examination.

COURSE OF ACTION:

I. The government should make arrangements to increase number of seats of intermediate courses in existing colleges.

II. The government should take active steps to open new colleges to accommodate all these successful candidates.

A. Both of them follows
B. None of them follows
C. Only I follow
D. Only II follows

Q.203 Statements

I. She topped in her collage

II. She is hard-working

A. Both statements are of some common cause
B. Statement 1 is the cause then 2 is its effect
C. Statement 2 is the cause then 1 is its effect.
D. Both of the statements are effect of independent causes

Q.204 Statement:

The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has been decreased.

COURSE OF ACTION:

I. To help the indigenous producers of fruits, the Government should impose high import duty on these fruits, even if these are not of good quality.

II. The fruit vendors should stop selling imported fruits. So that the demand for indigenous fruits would be increased.

A. Both of them follows
B. None of them follows
C. Only I follows
D. Only II follows

Q.205 What should come next to Confound, Illiterate, Bewilder,…?

A. Kind
B. Unlearned
C. Normal
D. Disable

Q.206 First step in graphing linear equation is to

A. Connect two points
B. Extend straight line
C. Identify and plot coordinates
D. Both A and B

Q.207 Complete the series ACD, AGD, AJD,_?

A. ABD
B. ATD
C. AND
D. AMD

Q.208 What was the name of Imam Bukhari (R.A)?

A. Muhammad bin Ismail
B. Muhammad Ismail
C. Muhammad Ibrahim
D. Both A and B

Q.209 If '-' means '+', '+' means '-', '×' means '÷' and '÷' means '×' then which of the following will be the correct equation?

A. 30 + 5 + 14 - 10 × 15 = 122
B. 10 + 5 - 14 ÷ 10 × 15 = 158
C. 30 - 5 + 14 ÷ 10 × 15 = 162
D. 30 × 5 - 4 ÷ 10 + 15 = 31

Q.210 Complete the series A3.3, B6.6, C9.9, _____?

A. D13.4
B. D13.2
C. D13.1
D. D13.2

As we know there is lot of mistakes in answer keys of PMC Practice tests, so I have decided to rectify all in proper in SKN STUDY GROUP