

University of Health Sciences, Lahore



Total MCQs: 220

Max. Marks: 1100

ENTRANCE TEST – 2011

For F.Sc. and Non-F.Sc. Students
Time Allowed: 150 minutes

Instructions:

- Read the instructions on the MCQs Response Form carefully.
- Choose the **Single Best Answer** for each question.
- Candidates are strictly prohibited from giving any identification mark except Roll No. & Signature in the specified columns only.

COMPULSORY QUESTION FOR IDENTIFICATION

Q-ID. What is the color of your Question Paper?

A) White.

C) Pink.

B) Blue.

D) Green.

Ans: Colour of your Question Paper is Green.

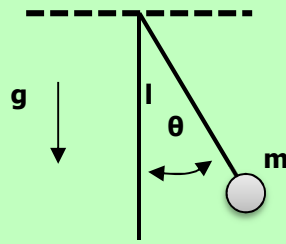
Fill the Circle Corresponding to Letter 'D' against 'ID' in your MCQ response form (Exactly as shown in the diagram).

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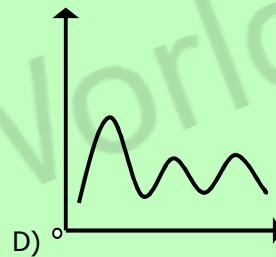
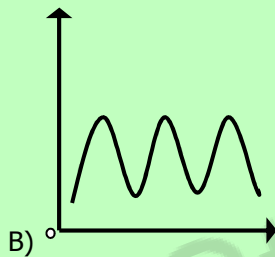
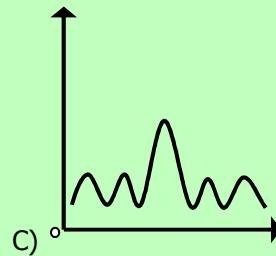
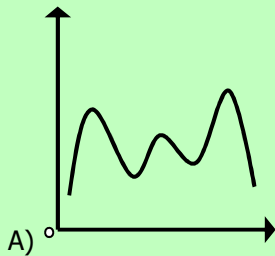
PHYSICS

- Q.1** When the dimensions of both sides of an equation are equal, then the equation is said to be
 A) Simultaneous C) Instantaneous
 B) Homologous D) Quadratic
- Q.2** Radian is a unit of angular displacement which can also be measured in degrees. How many radians are equal to one degree?
 A) $\frac{180}{\pi}$ C) $\frac{2\pi}{180}$
 B) $\frac{\pi}{180}$ D) $\frac{\pi}{57.3}$
- Q.3** An elevator is moving upwards with constant velocity of 'v'. What is a weight of a person of a mass 'm' inside the elevator during upward motion?
 A) $mg + mv$ C) $mg - mv$
 B) mg D) zero
- Q.4** An object having spherical shape of radius 'r' experiences a retarding force F from a fluid of co-efficient of viscosity ' η ' when moving through the fluid with speed 'v'. What is the ratio of retarding force to speed?
 A) $6\pi\eta r^2$ C) $6\pi\eta r$
 B) $6\pi\eta/r^2$ D) $6\pi\eta/r$
- Q.5** When the drag force is equal to the weight of the droplet, the droplet will fall with:
 A) High Speed C) Certain acceleration
 B) Low Speed D) Constant Speed

- Q.6** A simple pendulum length ' L ' with bob of mass ' m ' is slightly displaced from its mean position so that its string makes an angle ' θ ' with vertical line as shown in the figure. Then bob of pendulum released. What will be the expression of torque with which the bob starts to move towards the mean position?



- A) mgL
 B) $mgL \sin \theta$
 C) 0
 D) $mgL \cos \theta$
- Q.7** The density of blood is:
- A) Less than water
 B) Nearly equal to water
 C) Greater than water
 D) Three times that of water
- Q.8** A monochromatic light of wavelength ' λ ' is used to produce the diffraction pattern through a single slit of width X . Which one of the following represents the intensity distribution across the screen?

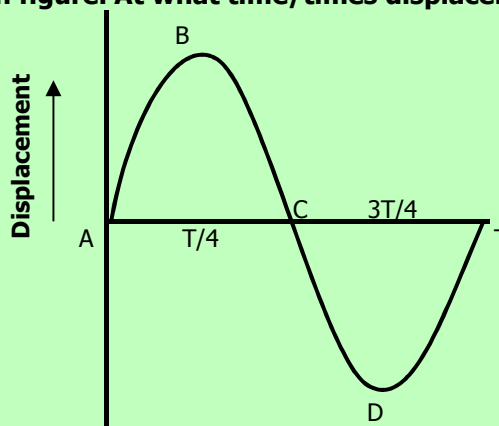


- Q.9** For interference of light waves to take place, the required condition is
- A) The path difference of the light waves from the two sources must be large
 B) The interfering waves must be non-coherent
 C) The light waves may come from different sources
 D) The light waves must come from two coherent sources
- Q.10** The property of bending of light around an obstacle and spreading of light waves into geometric shadow of an obstacle is called:
- A) Diffraction of Light
 B) Polarization of Light
 C) Quantization of Light
 D) Interference of Light
- Q.11** The normal human eye can focus a sharp image of an object on the eye if the object is located at certain distance called
- A) Least Point
 B) Near Point
 C) Far Point
 D) Distinct Point
- Q.12** A source of sound wave emits waves of frequency ' f '. If ' v ' is speed of sound waves, then what will be the wavelength of the waves
- A) $\frac{v}{f}$
 B) vf
 C) $\frac{v - u_0}{f}$
 D) $(v - u_0)f$

- Q.13** The spectrum of a star's light is measured and the wavelength of one of the lines as the sodium's line is found to be 589 nm. The same line has the wavelength of 497 nm when observed in the laboratory. This means the star is
- A) Moving away from the earth
B) Moving towards the north
C) Stationary
D) Revolving around the planet

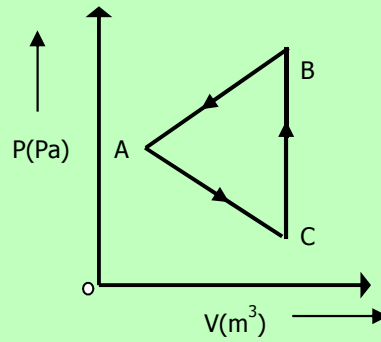
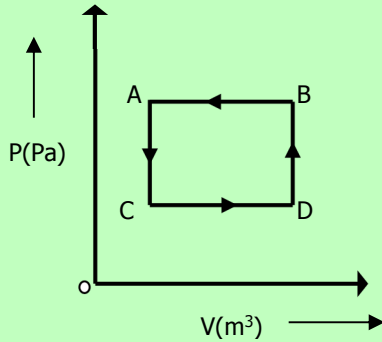
- Q.14** What is the period of mass spring system during SHM if the ratio of mass to spring constant is $\frac{1}{4}$?
- A) π
B) 2π
C) $\frac{1}{\pi}$
D) $\frac{1}{2}\pi$

- Q.15** Waveform of SHM is given in figure. At what time/times displacement is equal to zero?



- A) $T/4$ only
B) $3T/4$ only
C) 0, $T/4$, $3T/4$ and T
D) 0, $T/2$ and T
- Q.16** A wire is stretched by a force which causes an extension. The energy is stored in it only when:
- A) The extension of wire is proportional to force applied
B) The cross-section area of the wire remains constant
C) The wire is not stretched beyond its elastic limit
D) The weight of wire is negligible
- Q.17** Which statement is correct:
- A) Elasticity is that property of body which enables body to regain its original dimension
B) Elasticity is that property of a body that does not allow it to return to its original shape
C) Elasticity is that property of a body that allows it to retain its original shape and dimension after the stress is removed.
D) Elasticity is that property of a body that obeys Hooke's law.
- Q.18** Which of the following is the expression of root mean square speed of a gas having n number of molecules contained in the container?
- A) $\sqrt{\frac{v_1^2 + v_2^2 + \dots + v_x^2}{N}}$
B) $\frac{v_1^2 + v_2^2 + \dots + v_x^2}{N}$
C) $\sqrt{\frac{v_1 + v_2 + \dots + v_x}{N}}$
D) $\frac{v_1 + v_2 + \dots + v_x}{N}$
- Q.19** For a gas of volume V in its equilibrium state, if the pressure does change with time then total kinetic energy of gas is constant because
- A) Collisions between gas molecules occur
B) Collisions between gas molecules occur linearly
C) Collisions must be elastic
D) Collisions must be inelastic
- Q.20** Which of the following is the proper way to study the sinusoidal waveform of the voltage?
- A) Voltage is connected to X input and the time base is switched off
B) Voltage is connected to Y input and the time base is switched on
C) Voltage is connected to Y input and the time base is switched off
D) Voltage is connected to X input and the time base is switched on
- Q.21** Electron gun in cathode ray oscilloscope contains
- A) Filament, cathode, grid, anodes
B) Cathode, anode, capacitor, screen
C) Emitter, base, collector
D) Resistance, capacitor, inductor

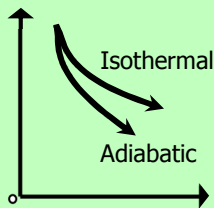
Q.22 In which of the following, the change in internal energy is more?



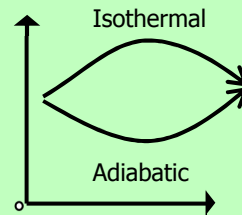
- A) In system A
B) In system B

- C) Cannot be predicted
D) Change is zero in both. (both are cyclic)

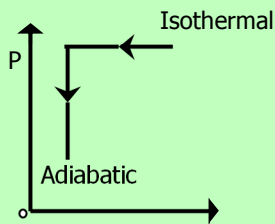
Q.23 Pressure volume graph of two systems 'A' and 'B' are plotted under isothermal and adiabatic conditions. Which of the following observation of graph represents the two systems?



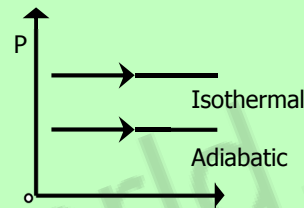
A)



C)

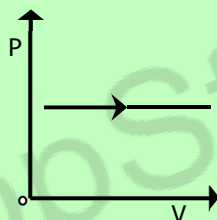


B)

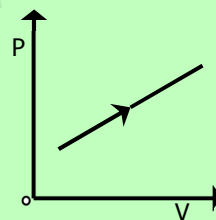


D)

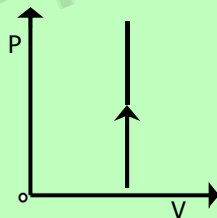
Q.24 Which of the following curve is an isotherm?



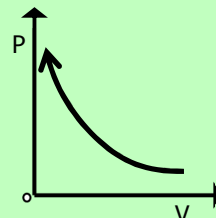
A)



C)



B)



D)

Q.25 If 2 A current passes through a resistor when connected to a certain battery. If the resistance is replaced by the double resistance, then the current will become

- A) 2 A
B) 4 A

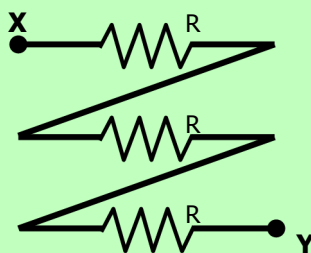
- C) 6 A
D) 1 A

Q.26 In Helium-Neon laser, population inversion of _____ atoms is achieved which emit radiations, when they are stimulated to fall at lower level.

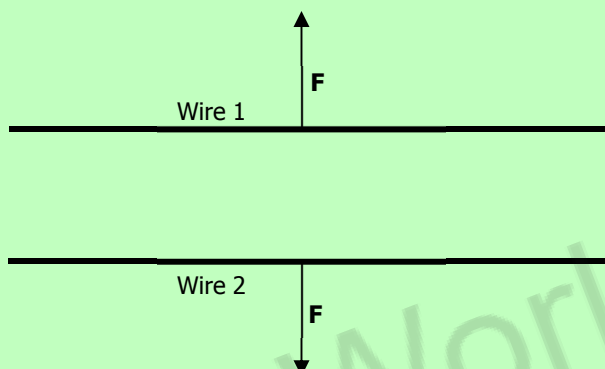
- A) Neon
B) Helium

- C) Helium and Neon
D) Chromium

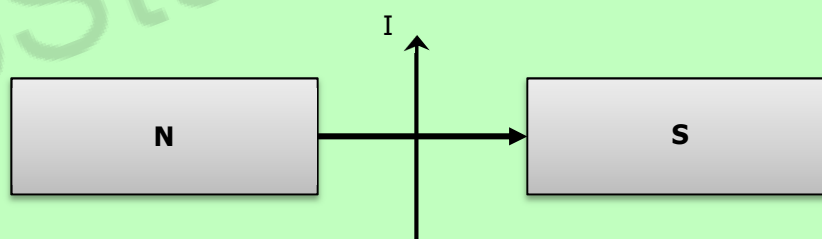
- Q.27** Three resistors each having value 'R' are connected as shown in figure. What is the equivalence resistance between 'X' and 'Y'?



- A) $3R$
 B) R
 C) $R/3$
 D) R^3
- Q.28** If the number of turns of a solenoid circular coil is doubled, but the current in the coil and radius of the coil remains same, then what will be the magnetic flux density produced by the coil?
- A) Magnetic flux density will be halved
 B) Magnetic flux density increases by different amount at different points
 C) Magnetic flux density remains unchanged
 D) Magnetic flux density will be doubled
- Q.29** Two long parallel wires Wire 1 and Wire 2 repel each other as shown in the figure. What could be the reasons?

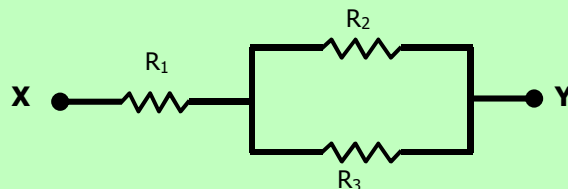


- A) Both carry current in same direction
 B) Both carry current in opposite direction
 C) Wire 1 has current, but Wire 2 has no current
 D) Wire 2 has current, Wire 1 has no current
- Q.30** The diagram shows a wire, carrying a current 'I', placed between the poles of a magnet: In which direction does the force on the wire act?



- A) Upwards
 B) Downwards
 C) Towards the 'N' pole of the magnet
 D) Towards the 'S' pole of the magnet
- Q.31** Wavelength of X-rays is the order of:
- A) 10^{-6} m
 B) 10^{-10} m
 C) 10^{-13} m
 D) 100 m
- Q.32** Laser beam can be used to generate three-dimensional image of object in a process called:
- A) Computed technology
 B) Computed tomography
 C) Holography
 D) Computerized axial tomography
- Q.33** Which of the following is true for Lasers?
- A) Electrons are emitted
 B) Stimulated emission of electrons is needed
 C) Coherent monochromatic light is emitted
 D) There is a population inversion of photons

Q.34 Three resistors of resistance R_1 , R_2 and R_3 are connected as shown in figure. Equivalence resistance is:



- A) $R_1 + R_2 + R_3$
 B) $\frac{R_1 + R_2 + R_3}{R_1 R_2}$
 C) $\frac{R_1 R_2 + R_2 R_3 + R_1 R_3}{R_1 + R_2}$
 D) $\frac{R_1 R_2 R_3}{R_2 R_3}$

Q.35 What is meant by spontaneous emission of electrons in solids?

- A) Electrons being emitted by the solids through photoelectric effect when irradiated with electromagnetic radiation
 B) Incident electrons colliding with electrons in solids and releasing doubling the number of incident electrons
 C) Electrons in solids are emitted without any external stimulus through radiation
 D) Excited electrons going back to lower energy states immediately by releasing energy.

Q.36 When electrons lose all their kinetic energy in the first collision, the entire kinetic appears as an X-ray photon of energy:

- A) $K.E = eV$
 B) $K.E = \frac{h\lambda_{\min}}{c}$
 C) $K.E = \frac{hc}{\lambda_{\min}}$
 D) $K.E = \frac{h}{\lambda_{\max}}$

Q.37 The characteristic X-ray spectrum is due to:

- A) The absorption of neutrons by target material
 B) The bombardment of target material by protons
 C) The bombardment of target material by electrons
 D) The bombardment of target material by alpha particles

Q.38 Ionizing capability of gamma rays is:

- A) Equal to alpha and beta particle
 B) Less than alpha but greater than beta particles
 C) Less than both alpha and beta particles
 D) Less than beta but greater than alpha particles

Q.39 Half-life of a radioactive element is:

- A) Inversely proportional to square of decay constant
 B) Directly proportional to square of decay constant
 C) Directly proportional to decay constant
 D) Inversely proportional to decay constant

Q.40 The transformation of a neutron into proton in the nucleus gives rise to emission of:

- A) Beta particles
 B) Alpha particles
 C) Gamma particles
 D) X-rays

Q.41 The ratio of the rate of decay of a parent atom to the number of radioactive nuclei present at that time is equal to:

- A) Half-life of radioactive element
 B) Mean life
 C) Decay constant of radioactive element
 D) Activity of radioactive element

Q.42 Which one of the following particle is emitted as a result of nuclear reaction?



- A) Beta
 B) Alpha
 C) Gamma rays
 D) One alpha and one beta

Q.43 Which of following is used to estimate the circulation of blood in a patient?

- A) Carbon-14
 B) Carbon-12
 C) Phosphorus-32
 D) Sodium-24

Q.44 For the radiotherapy of a patient, it is required to double the absorbed dose in gray. What step must be taken?

- A) Energy must be quadrated
 B) Energy must be halved
 C) Energy must be raised four times
 D) Energy must be doubled

CHEMISTRY

- Q.45 In mass spectrometer, detector or collector measures the:**
 A) Masses of isotopes
 B) Percentages of isotopes
 C) Relative abundances of isotopes
 D) Mass numbers of isotopes
- Q.46 How many 'Cl' (chlorine) atoms are in two moles of chlorine?**
 A) $2 \times 6.02 \times 10^{23}$ atoms
 B) $35.5 \times 6.02 \times 10^{23}$ atoms
 C) 2×10^{23} atoms
 D) $2 \times 6.02 \times 10^{23}$ atoms
- Q.47 Melting point of water is higher than petrol, because intermolecular forces in water are:**
 A) Weaker than petrol
 B) Stronger than petrol
 C) Same as in petrol
 D) Negligible
- Q.48 DNA molecule is double stranded, in which two chains of DNA are twisted around each other by:**
 A) Hydrogen bonds
 B) Vander Waal's force
 C) Covalent bonds
 D) Dative bonds
- Q.49 The elements for which the value of ionization energy is low, can:**
 A) Gain electrons readily
 B) Gains electron with difficulty
 C) Loss electrons less readily
 D) Lose electrons readily
- Q.50 The nature of cathode rays in discharge tube:**
 A) Depends on the nature of gas taken in the discharge tube
 B) Depends upon the nature of cathode in discharge tube
 C) Is independent of the nature pf the gas in discharge tube
 D) Depends upon the nature of anode in the discharge tube
- Q.51 The ability of an atom in a covalent bond to attract the bonding electrons is called:**
 A) Ionization energy
 B) Ionic bond energy
 C) Electronegativity
 D) Electron affinity
- Q.52 The paramagnetic character of a substance is due to:**
 A) Bond pairs of electrons
 B) Lone pairs of electrons
 C) Unpaired electrons in atom or molecule
 D) Paired electrons in valence shells of electrons
- Q.53 Lattice energy of an ionic crystal is the enthalpy of:**
 A) Combustion
 B) Dissociation
 C) Dissolution
 D) Formation
- Q.54 In standard enthalpy of atomization, heat of the surrounding:**
 A) Remains unchanged
 B) Increases
 C) Increases than decreases
 D) Decreases
- Q.55 Mole fraction of any compound us the ratio of moles of all components in a:**
 A) Compound
 B) Solution
 C) Molecule
 D) Solid
- Q.56 Molarity is defined as the number of moles of any substance dissolved:**
 A) Per dm^3 of water
 B) In one gram of water
 C) Per m^3 of water
 D) In 100 ml of water
- Q.57 In electrolytic cell, a salt bridge is used in order to:**
 A) Pass the electric current
 B) Prevent the flow of ions
 C) Mix solution of two half cells
 D) Allow movement of ions b/w two half cells
- Q.58 In all oxidation reactions, atoms of an element in a chemical species lose electrons and increase their:**
 A) Oxidation states
 B) Reductions
 C) Electrode
 D) Negative charges
- Q.59 In 'AgCl' solution. Some salt of NaCl is added, 'AgCl' will be precipitated due to:**
 A) Solubility
 B) Electrolyte
 C) Unsaturation effect
 D) Common ion effect

Q.60 'Ka' for an acid is higher, the stronger is the acid; relate the strength an acid with 'pKa'

- A) Higher pKa, weaker the acid
 B) Lower pKa, stronger the acid
 C) pKa has no relation with acid strength
 D) Both A and B

Q.61 It is experimentally found that a catalyst is used to:

- A) Lower the activation energy
 B) Increase the activation energy
 C) Lower the pH
 D) Decrease the temp of the reaction

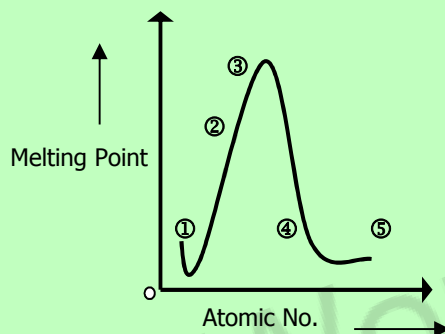
Q.62 According to collision theory of bimolecular reaction sin gas phase, the minimum amount of energy required for an effective collision is known as:

- A) Heat of reaction
 B) Rate of reaction
 C) Has no effect on the reaction
 D) Energy of activation

Q.63 Carbon exists as allotropes, which are different crystalline or molecular forms of the same substance. Graphite and diamond are allotropes of carbon. Diamond is a non-conductor whereas graphite is a good conductor because:

- A) Graphite has a layered structure
 B) In graphite, all valence electrons are tetrahedrally bound
 C) In graphite one of valence electron is free to move
 D) Graphite is soft and greasy

Q.64 The diagram below is a plot of melting points of elements of second period against their atomic numbers. Lithium and fluorine are placed at the extreme ends of the plot, on the basis of melting points where will you place Carbon among the empty slots on the plot?



- A) 1
 B) 2
 C) 4
 D) 3

Q.65 When elements of group II-A (alkaline earth metals) are exposed to air, they quickly become coated with a layer of oxide. What is the purpose of this oxide layer?

- A) The oxide layer exposes the metal to Atmospheric attack
 B) The oxide layer increases the reactivity of metal
 C) The oxide layer protects the metal from further atmospheric attack
 D) The oxide layer gives the metal a shiny silvery appearance

Q.66 In silicon dioxide each silicon atom is tetrahedrally bonded to four oxygen atoms and each oxygen atom is bonded to two silicon atoms. The ratio of silicon to oxygen atoms is:

- A) 2:2
 B) 1:2
 C) 2:1
 D) 1:4

Q.67 Hydrogenation of unsaturated oils is done by using:

- A) Finally divided nickel
 B) Finally divided iron
 C) Vanadium pentaoxide
 D) Copper

Q.68 Pick the correct statement:

- A) Chelates are usually more stable than ordinary complexes
 B) Ordinary complexes are more stable than chelates
 C) Monodentate ligands form the chelates
 D) Chelates have no ring structures

Q.69 In contact process, the catalyst used for the conversion of Sulphur dioxide to Sulphur trioxide is:

- A) Magnesium oxide
 B) Aluminum oxide
 C) Silicon dioxide
 D) Vanadium pentoxide

- Q.70 The unpolluted natural rain water is slightly acidic due to the reaction of rain water with:**
 A) Sulphur dioxide
 B) Oxides of nitrogen
 C) Carbon dioxide
 D) Hydrogen present in air
- Q.71 In the Haber's process for the manufacturing of ammonia, nitrogen is taken from:**
 A) Proteins occurring in living bodies
 B) Ammonium salts obtained industrially
 C) Air
 D) Mineral containing nitrates
- Q.72 In comparison with oxygen gas, a strong triple bond is present between two nitrogen atoms in a molecule and therefore nitrogen gas is:**
 A) Highly reactive gas
 B) Completely inert like noble gases
 C) Very less reactive gas
 D) Moderately reactive gas
- Q.73 The compound with an atom, which has unshared pair of electrons is called:**
 A) Nucleophile
 B) Electrophile
 C) Protophile
 D) None of the above
- Q.74 1-chloropropane and 2-chloropropane are isomers of each other, the type of isomerism in these two is called:**
 A) Cis-trans isomerism
 B) Chain isomerism
 C) Position isomerism
 D) Functional group isomerism
- Q.75 Benzene in the presence of AlCl_3 produces acetophenone when reacts with:**
 A) Acetyl chloride
 B) Acetic acid
 C) Ethyl benzene
 D) Ethanoic acid
- Q.76 The substitution of a '-H' by '-NO₂' group in benzene is called:**
 A) Nitration
 B) Ammonolysis
 C) Sulphonation
 D) Reduction of benzene
- Q.77 When purely alcoholic solution of sodium/potassium hydroxide and halogenoalkanes are reacted an alkene is formed, what is the mechanism of reaction?**
 A) Elimination
 B) Dehydration
 C) Debromination
 D) Reduction of benzene
- Q.78 The organic compound carbon tetrachloride is used as:**
 A) Lubricant
 B) Solvent
 C) Oxidant
 D) Plastic
- Q.79 An alcohol is converted to an aldehyde with same number of carbon atoms as that of alcohol in the presence of $\text{K}_2\text{Cr}_2\text{O}_7/\text{H}_2\text{SO}_4$ the alcohol is:**
 A) $\text{CH}_3\text{C}(\text{CH}_3)_2\text{OH}$
 B) $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$
 C) $(\text{CH}_3)_3\text{COH}$
 D) $(\text{CH}_3)_3\text{CHOH}$
- Q.80 Which of the following is a secondary alcohol?**
- $$\begin{array}{c} \text{H}_3\text{C}-\text{CH}-\text{OH} \\ | \\ \text{CH}_3 \end{array}$$

A)

$$\begin{array}{c} \text{H}_3\text{C}-\text{CH}-\text{CH}_2-\text{OH} \\ | \\ \text{CH}_3 \end{array}$$

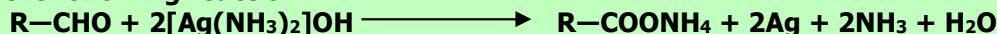
C)
- $$\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{OH}$$

B)

$$\begin{array}{c} \text{CH}_3 \\ | \\ \text{H}_3\text{C}-\text{CH}-\text{CH}_2-\text{C}-\text{CH}_3 \\ | \quad | \\ \text{CH}_3 \quad \text{OH} \end{array}$$

D)
- Q.81 Which enzyme is involved in the fermentation of glucose:**
 A) Zymase
 B) Invertase
 C) Urease
 D) Diastase
- Q.82 Relative acidic strength of alcohol, phenol, water and carboxylic acid is:**
 A) Carboxylic acid > Alcohol > Phenol > Water
 B) Carboxylic acid > Phenol > Water > Alcohol
 C) Phenol > Carboxylic acid > Alcohol > Water
 D) Water > Alcohol > Phenol > Carboxylic acid

Q.83 Consider the following reaction:



This reaction represents one of the following tests.

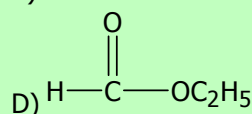
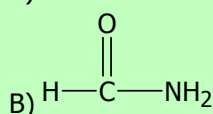
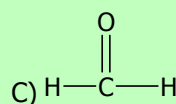
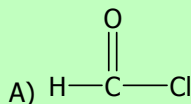
- A) Fehling test
B) Benedict test
C) Ninhydrin test
D) Tollens test

Q.84 In the below reaction, the nucleophile is:



- A) CN^-
B) HCl
C) Cl^-
D) OH^-

Q.85 Which one of the following compound belongs to the homologous series of aldehydes?



Q.86 $\text{CH}_3\text{COOH} + \text{PCl}_5 \longrightarrow ?$

The products of the above reaction are:

- A) $\text{CH}_3\text{COI} + \text{POCl}_3 + \text{HCl}$
B) $\text{CH}_3\text{COI} + \text{POCl}_2 + \text{HCl}$
C) $\text{CH}_3\text{Cl} + \text{POCl}_3 + \text{HCl}$
D) $\text{CH}_3\text{COCl} + \text{POCl}_3 + \text{H}_2$

Q.87 $\text{CH}_3\text{CN} + \text{HCl} \longrightarrow \text{A} + \text{B}$ (in the presence of water)

In the above reaction, A and B are:

- A) Acetic acid and acid amide
B) Acetic acid and ammonia
C) Acetic acid and methyl chloride
D) Acetic acid and ammonium chloride

Q.88 Consider the following reaction:



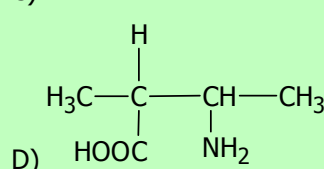
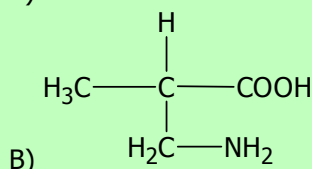
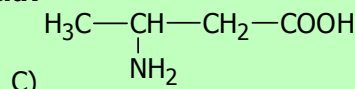
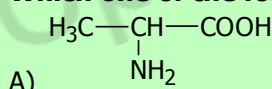
What product will form?

- A) Magnesium formate
B) Magnesium acetate
C) Magnesium ion
D) Carboxylate ion

Q.89 The $-\text{NH}-\text{CO}$ is called:

- A) Amide group
B) Amino group
C) Protein linkage
D) Peptide linkage

Q.90 Which one of the following is an alpha amino acid?



Q.91 Which of the following has an amino R-group?

- A) Lysine
B) Proline
C) Valine
D) Alanine

Q.92 At intermediate value of pH, amino acids form Zwitter ions containing:

- A) $-\text{N}^+\text{H}_3$ and COO^-
B) $-\text{NH}_3$ and COO^-
C) $-\text{N}^+\text{H}_3$ and COOH
D) $-\text{NH}_3$ and COOH

Q.93 When hexane dioic acid is heated with hexamethylene diamine, the compound formed is:

- A) Polypeptide
B) Addition polymer
C) Ester
D) Nylon 6,6

- Q.94 A polymer in which the number of amino acid residue is greater than 100 or molecular mass is greater than 1000, is known as:**
 A) Protein
 B) Polypeptide
 C) Dipeptide
 D) Tripeptide
- Q.95 Aspartic acid is an acidic amino acid, which has chemical formula:**
 A) $\begin{array}{c} \text{H}_3\text{C}-\text{CH}-\text{COOH} \\ | \\ \text{NH}_2 \end{array}$
 B) $\begin{array}{c} \text{H} \\ | \\ \text{H}_2\text{N}-\text{C}-\text{COOH} \\ | \\ \text{H}_2\text{C}-\text{COOH} \end{array}$
 C) $\begin{array}{c} \text{H}_3\text{C}-\text{CH}-\text{CH}_2-\text{COOH} \\ | \\ \text{NH}_2 \end{array}$
 D) $\begin{array}{c} \text{H} \\ | \\ \text{H}_3\text{C}-\text{C}-\text{CH}-\text{COOH} \\ | \quad | \\ \text{H} \quad \text{NH}_2 \end{array}$
- Q.96 Glucose and fructose are common examples of:**
 A) Pentoses
 B) Hexoses
 C) Heptoses
 D) Butoses
- Q.97 The reaction between fats and caustic soda is called:**
 A) Hydrogenolysis
 B) Fermentation
 C) Carboxylation
 D) Saponification
- Q.98 Macromolecules are described as large molecules built up from small repeating units known as:**
 A) Monomers
 B) Isomers
 C) Metameres
 D) Tautomer
- Q.99 Polyvinyl chloride is an example of:**
 A) Addition polymer
 B) Condensation polymer
 C) Biopolymer
 D) Thermosetting polymer
- Q.100 Terylene, a polyester is an example of:**
 A) Biopolymer
 B) Lipids
 C) Condensation polymer
 D) Addition polymer
- Q.101 The suspected liver carcinogen which also has negative reproduction and developmental effect on humans is:**
 A) Iodoform
 B) Bromoform
 C) Tropoform
 D) Chloroform
- Q.102 Peroxyacetyl nitrate is an irritant to human beings and its effects:**
 A) Nose
 B) Stomach
 C) Ears
 D) Eyes

ENGLISH

- Q.103 She managed to _____ a ticket for the cricket match.**
 A) Procure
 B) Obscure
 C) Improvise
 D) Preclude
- Q.104 Things have got out of hand; we must take steps to _____ the situation**
 A) Rectify
 B) Pacify
 C) Purify
 D) Testify
- Q.105 George Orwell's animal farm is a stinging _____ on the Russian revolution**
 A) Myth
 B) Satire
 C) Fallacy
 D) Legend
- Q.106 All the _____ and ceremony of the royal wedding was telecast on the national television circuit.**
 A) Festival
 B) Romp
 C) Pomp
 D) Happiness

⇒ **SPOT THE ERROR:** In the following sentences, some segments of each sentence are underlined. Your task is to identify that underlined segment of the sentence, which contains the mistake that needs to be corrected. Fill the Circle corresponding to that letter under the segment in the MCQ Response Form.

- Q.107** The patient's blood analysis shows that there is a big number of amorphous cells which are quiet unidentifiable.
A) B) C) D)
- Q.108** The police, in their investigation, used coercive measure to get favorable statement from the accused.
A) B) C) D)
- Q.109** Your argument is simply abstruse as there is no clarity of thought and coherence in ideas and it also lack vision.
A) B) C) D)
- Q.110** The workers were raising much hue and cry when their demands were turned away.
A) B) C) D)
- Q.111** The disease is uncurable without the judicious use of antibiotics.
A) B) C) D)
- Q.112** The younger sister hopes to emulate her elder sister's sporting achievement as she is putting up hectic effort.
A) B) C) D)

⇒ **In each of the following question, four alternative sentences are given. Choose the CORRECT one and fill the Circle corresponding to that letter in the MCQ Response Form.**

- Q.113**
A) The government should accrue taxes for strengthen the economy of the country.
B) The government should accrue taxes in strengthen the economy of the country.
C) The government should accrue taxes to strengthen the economy of the country.
D) The government should accrue taxes by strengthen the economy of the country.

- Q.114**
A) Foreign trade have assumed greater importance in recent years.
B) Foreign trade is assumed greater importance in recent years.
C) Foreign trade has assumed greater importance in recent years.
D) Foreign trade shall assumed greater importance in recent years.

- Q.115**
A) The space programme has been battered in bureaucratic wrangling.
B) The space programme has been battered into bureaucratic wrangling.
C) The space programme has been battered by bureaucratic wrangling.
D) The space programme has been battered to bureaucratic wrangling.

- Q.116**
A) He will has to deal with the problem by showing adroitness.
B) He will have to deal with the problem by showing adroitness.
C) He will had to deal with the problem by showing adroitness.
D) He will having to deal with the problem by showing adroitness.

- Q.117**
A) He does possesses altruistic behavior. C) He does possessing altruistic behavior.
B) He does possess altruistic behavior. D) He does possessed altruistic behavior.

- Q.118**
A) He has great affinity in nature. C) He has great affinity by nature.
B) He has great affinity with nature. D) He has great affinity at nature.

- Q.119**
A) He stands on arms akimbo. C) He stands with arms akimbo.
B) He stands to arms akimbo. D) He stands through arms akimbo.

Q.120

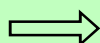
- A) An amorphous mass of cells are difficult to understand.
- B) An amorphous mass of cells were difficult to understand.
- C) An amorphous mass of cells had difficult to understand.
- D) An amorphous mass of cells is difficult to understand.

Q.121

- A) He is suffering to anaphylactic shock.
- B) He is suffering in anaphylactic shock.
- C) He is suffering from anaphylactic shock.
- D) He is suffering into anaphylactic shock.

Q.122

- A) If you had asked him, he would had accepted the offer with alacrity.
- B) If you had asked him, he would have being accepted the offer with alacrity.
- C) If you had asked him, he would have accepted the offer with alacrity.
- D) If you had asked him, he would been accepted the offer with alacrity.



In each of the following question, four alternative meanings of a word are given. You have to select the NEAREST CORRECT MEANING of the given word and fill the appropriate Circle on the MCQ Response Form.

Q.123 **MUSE**

- A) Wander
- B) Fonder
- C) Robust
- D) Ponder

Q.124 **FECKLESS**

- A) Useless
- B) Careless
- C) Dauntless
- D) Fearless

Q.125 **MOSAIC**

- A) Pattern
- B) Mortal
- C) Ordinary
- D) Musical

Q.126 **INSCRUTABLE**

- A) Immoral
- B) Unethical
- C) Enigmatic
- D) Unaccountable

Q.127 **JUXTAPOSE**

- A) Justify
- B) Compare
- C) Expose
- D) Jettison

Q.128 **LACERATING**

- A) Landing
- B) Tearing
- C) Flagging
- D) Lactating

Q.129 **EMPATHY**

- A) Fictitious
- B) Facility
- C) Ability
- D) Felicity

Q.130 **EVANESCENT**

- A) Evident
- B) Permanent
- C) Event
- D) transitory

Q.131 **SIDLE**

- A) Sneak
- B) Sift
- C) Sledge
- D) Sieve

Q.132 **DISSONANCE**

- A) Inconsistency
- B) Expansion
- C) Perceptible
- D) WrapPart

BIOLOGY

- Q.133 When chromosomes uncoil, the nucleoli are reformed and two nuclei are the two poles of the cell; stage is known as**
A) Prophase C) Telophase
B) Metaphase D) Anaphase
- Q.134 Mental retardation, short stature, broad face and squint eyes are the symptoms of**
A) Down's syndrome C) Turner's syndrome
B) Klinefelter's syndrome D) XYZ syndrome
- Q.135 Chiasmata formation takes place during the process which is known as**
A) Crossing Over C) Pairing
B) Attachment D) Leptotene
- Q.136 Healing of a wound and repair is the phenomenon which takes place by the process of**
A) Mitosis C) Cell Growth
B) Meiosis D) Mitosis & Meiosis
- Q.137 Which one of the following is the main cause of cancer?**
A) Mutation C) Regulated Mitosis
B) Controlled Cell Division D) Haploid Division
- Q.138 The covalent bond formed between two monosaccharides is called**
A) Glycosidic Bond C) Peptide Bond
B) Hydrogen Bond D) Disulphide
- Q.139 The bond formed between glucose and fructose form sucrose is**
A) 1,4 Glycosidic Linkage C) 1,6 Glycosidic Linkage
B) 1,2 Glycosidic Linkage D) 1,3 Glycosidic Linkage
- Q.140 In an amino acid in which the R-group is H, its name will be**
A) Alanine C) Leucine
B) Glycine D) Valine
- Q.141 Fatty acid are the organic compounds containing hydrogen, oxygen and one of the following are**
A) $-\text{COOH}$ C) Acyl
B) $-\text{NH}_2$ D) Sucrose
- Q.142 Posomes are used in gene therapy against**
A) Hypercholesterolemia C) Cystic Fibrosis
B) Coronary Artery Angioplasty D) Severe Combined Immunodeficiency Syndrome (SCID)
- Q.143 Genetically engineered cells are introduced into bone marrow cells in the treatment of**
A) Hypercholesterolemia C) Cystic Fibrosis
B) Severe Combined Immunodeficiency Syndrome (SCID) D) Coronary Artery Angioplasty
- Q.144 Which one of the following is depleting and causing thinning of ozone?**
A) Chlorine C) Chlorofluorocarbon
B) Bromine D) Carbon
- Q.145 The typical environment of a particular organism population community is called**
A) Niche C) Habitat
B) Ecosystem D) Biosphere
- Q.146. Excessive enrichment of water with nutrients by human activity by which large amount of living organic matter grows is called**
A) Archeotrophication C) Enrichment
B) Eutrophication D) Low Trophication

- Q.147 In an ecosystem, mycorrhizae is an example of**
 A) Symbiosis
 B) Predation
 C) Commensalism
 D) Parasitism
- Q.148 Successive stages of eating and being eaten by which recycling of materials and flow of energy takes place is called**
 A) Food Chain
 B) Food Web
 C) Trophic Level
 D) Food Link
- Q.149 The sex of individuals of next generation always depends on one of the parents who is**
 A) Heterogametic
 B) Homogametic
 C) Isogametic
 D) Isomorphic
- Q.150 Which of the following will be hemophilic?**
 A) $X^H X^h$
 B) $X^H X^H$
 C) $X^h Y$
 D) $X^H Y$
- Q. 151 Which of the following is an example of X-linked recessive trait in humans?**
 A) Hypophosphatemic Rickets
 B) Colour Blindness
 C) Baldness
 D) Beard Growth
- Q.152 Which trait in human is an example of multiple alleles?**
 A) Eye Colour
 B) Skin Colour
 C) ABO-Blood Group
 D) Rh-Blood Group
- Q.153 When a gene pair at one locus interacts with another gene at another locus, the interaction is called**
 A) Dominance
 B) Multiple Alleles
 C) Pleiotropy
 D) Epistasis
- Q.154 The combination of a pentose sugar with a base result in a compound is known as**
 A) Nucleotide
 B) Nucleoside
 C) Nucleic Acid
 D) Polynucleotide
- Q.155 An enzyme and substrate reacts through a special feature or site present in enzyme:**
 A) Building Site
 B) Active Site
 C) Catalyst Site
 D) Inhibition Site
- Q.156 The non-protein part of enzyme which is covalently and permanently bonded is called**
 A) Prosthetic Group
 B) Co-Factor
 C) Co-Enzyme
 D) Activator
- Q.157 One of the pyrimidine bases is absent in DNA**
 A) Uracil
 B) Thymine
 C) Cytosine
 D) Adenine
- Q.158 Enzymes increase the rate of reaction by**
 A) Increasing Temperature
 B) Decreasing pH
 C) Decreasing Activation Energy
 D) Increasing Activation Energy
- Q.159 Which one of the following diseases caused by enveloped RNA virus and spread in epidemic form?**
 A) Influenza
 B) Herpes Simplex
 C) Polio
 D) Small Pox
- Q.160 The structure which contains the gene for drug resistance bacteria are**
 A) Nucleoids
 B) Mesosomes
 C) Chromatin Bodies
 D) Plasmids
- Q.161 Antibiotics that kill microbes immediately are called**
 A) Microbistatic
 B) Microbicidal
 C) Biostatic
 D) Chemotherapeutic

Q.162 Which one of the following fungi causes vaginal thrush?

- A) Candida
- B) Aspergillus
- C) Tortula
- D) Penicillium

Q.163 Body cavity of round worms is called

- A) Pseudocoelom
- B) Coelom
- C) Acoelom
- D) Enteron

Q.164 Fasciola is endoparasite of

- A) Colon
- B) Liver
- C) Small Intestine
- D) Bile Duct

Q.165 Trypanosoma is transmitted in human beings by

- A) Plasmodium
- B) Anopheles
- C) House Fly
- D) Tsetse Fly

Q.166 The nervous system develops from which of the following layer during embryonic development of animals

- A) Mesoderm
- B) Ectoderm
- C) Endoderm
- D) Mesoderm and Endoderm

Q.167 Endosperm is formed as a result of

- A) Pollination
- B) Self-Pollination
- C) Double Fertilization
- D) Cross Pollination

Q.168 Which of the following enzyme is released in an inactive form

- A) Amylase
- B) Lipase
- C) Enterokinase
- D) Pepsin

Q.169 Which of the following hormones stimulate the secretion of pancreatic juice from pancreas in liver?

- A) Secretin
- B) Pepsinogen
- C) Gastrin
- D) Both Gastrin and Secretin

Q.170 In large intestine, vitamin k is formed by the activity of

- A) Symbiotic Bacteria
- B) Obligate Bacteria
- C) Parasitic Bacteria
- D) Facultative Bacteria

Q.171 During swallowing of food which structure close nasal opening?

- A) Hard Palate
- B) Soft Palate
- C) Epiglottis
- D) Larynx

Q.172 The right atrium of the heart usually receives the

- A) Deoxygenated Blood
- B) Oxygenated Blood
- C) Filtered Blood
- D) Non-Filtered Blood

Q.173 The largest lymph duct called thoracic lymph duct drains into

- A) Subclavian Vein
- B) Renal Vein
- C) Pulmonary Vein
- D) Hepatic Portal Vein

Q.174 Which protein plays a major role in maintaining osmotic balance?

- A) Albumin
- B) Globulin
- C) Fibrinogen
- D) Prothrombin

Q.175 The type of agranulocytes which stays in blood for a few hours and then enters tissues and become macrophages are

- A) Lymphocytes
- B) Monocyte
- C) Eosinophils
- D) Basophils

Q.176 Reabsorption of water by counter current multiplier mechanism takes place at

- A) Proximal Tubule
- B) Distal Tubule
- C) Collecting Duct
- D) Loop of Henle

- Q.177 Antidiuretic hormone helps in reabsorption of water by changing permeability of**
 A) Proximal Tubule C) Collecting Duct
 B) Distal Tubule D) Loop of Henle
- Q.178 During peritoneal dialysis, dialysis fluid is introduced into which part of human body?**
 A) Liver C) Kidney
 B) Abdomen D) Pancreas
- Q.179 Aldosterone helps in conservation or active absorption of**
 A) Sodium C) Potassium
 B) Calcium D) Bicarbonate Ions
- Q.180 Maximum reabsorption takes place in which part of the nephron?**
 A) Distal Tubule C) Cortical Tissue
 B) Villi D) Proximal Tubule
- Q.181 Over-activity of sympathetic nervous system causes**
 A) Disturbance of Vision C) Decrease in Blood Pressure
 B) Constipation D) Increase in Heart Rate
- Q.182 Which structures respond when they are stimulated by impulse coming through motor neuron?**
 A) Receptors C) Effectors
 B) Responses D) Transduction
- Q.183 Respiratory center is located in**
 A) Cerebrum C) Medulla
 B) Cerebellum D) Hypothalamus
- Q.184 A neurological condition characterized by involuntary tremors, diminished motor activity and rigidity is called**
 A) Epilepsy C) Alzheimer's Disease
 B) Parkinson's Disease D) Cerebular Tumours
- Q.185 A type of cell in human testes which produces testosterone is called**
 A) Interstitial Cells C) Sertoli Cells
 B) Germ Cells D) Spermatocytes
- Q.186 Breakdown of endometrium during menstruation is due to**
 A) Increase in Level of LH C) Increase in Level of Progesterone
 B) Decrease in Level of Progesterone D) Increase in Level of Oestrogen
- Q.187 Oogonia are produced in the germ cells**
 A) Both Uterus and Cervix C) Uterus
 B) Cervix D) Ovary
- Q.188 Which of the following diseases can be prevented through vaccination?**
 A) AIDS and Cancer C) Typhoid and Cancer
 B) Malaria and AIDS D) Measles and Mumps
- Q.189 Newly produced cells/individuals which are identical in each other are known as**
 A) Genetically Modified C) Transgenic Bacteria
 B) Transgenic Animals D) Clones
- Q.190 Which of the following is a blood borne disease?**
 A) Hepatitis C) Influenza
 B) Cholera D) Candidiasis
- Q.191 The control of pest has traditionally meant regulation by natural enemies, predators, parasites and pathogens. This type of control is known as**
 A) Cultural Control C) Pesticides Control
 B) Biological Control D) Insecticides Control

Q.192 Which of the following organelles is concerned with the cell secretion

- A) Ribosomes
- B) Golgi Apparatus
- C) Lysosomes
- D) Mitochondria

Q.193 Which of the following contains peptidoglycan cell wall?

- A) Penicillium
- B) Bacterium
- C) Adiantum
- D) Polytrichum

Q.194 The inner membrane of mitochondria is folded to form finger like structure called

- A) Cristae
- B) Vesicle
- C) Matrix
- D) Cisternae

Q.195 Interior of chloroplast is divided into heterogeneous structure, embedded in the matrix known as

- A) Grana
- B) Stroma
- C) Thylakoids
- D) Cisternae

Q.196 In which phase of the cell division the metabolic activity of the nucleus is high?

- A) Mitosis
- B) Interphase
- C) Meiosis
- D) Cell Cycle

Q.197 Luteinizing hormone triggers

- A) Cessation of Oogenesis
- B) Breakdown of Oocyte
- C) Ovulation
- D) Development of Zygote

Q.198 Syphilis is a sexually transmitted disease which is caused by

- A) HIV / AIDS
- B) Pseudomonas Pyogenes
- C) Treponema Pallidum
- D) Neisseria

Q.199 Muscle is made up of many cells which are referred to as

- A) Myofilaments
- B) Myofibrils
- C) Sarcolemma
- D) Muscles Fiber

Q.200 The length of myofibril from one Z-band to the next is known as

- A) Sarcomere
- B) Sarcolemma
- C) Sarcoplasm
- D) Muscle Fiber

Q.201 Calcium ions released during a muscle fiber contraction attach with

- A) Myosin
- B) Actin
- C) Tropomyosin
- D) Troponin

Q.202 A muscle condition resulting from the accumulation of lactic acid and ionic imbalance is:

- A) Tetany
- B) Muscle Fatigue
- C) Cramp
- D) Tetanus

Q.203 The pigment which stores oxygen in muscles is

- A) Hemoglobin
- B) Myoglobin
- C) Myosin
- D) Actinomyosin

Q.204 Neurosecretory cells are present in which part of brain

- A) Hypothalamus
- B) Midbrain
- C) Pons
- D) Cerebellum

Q.205 Which of the following is the function of glucagon hormone?

- A) Glycogen to Glucose
- B) Glucose to Glycogen
- C) Glucose to Lipids
- D) Glucose to Proteins

Q.206 Addison's disease is caused due to destruction of

- A) Adrenal Cortex
- B) Pituitary Adrenal Axis
- C) Adrenal Medulla
- D) Hypothalamus

Q.207 Which group of hormones is made up of amino acids and their derivatives?

- A) Vasopressin and ADH
- B) Epinephrine and Non-Epinephrine
- C) Oestrogen and Testosterone
- D) Insulin and Glucagon

- Q.208 Thymus gland is involved in maturation of**
 A) Platelets C) Eosinophils
 B) B-Lymphocytes D) T-Lymphocytes
- Q.209 In passive immunity which of the following component are injected into blood**
 A) Antigens C) Serum
 B) Immunogens D) Immunoglobulins
- Q.210 Mucous membranes are part of body defense system and they offer**
 A) Physical Barriers C) Chemical Barriers
 B) Mechanical Barriers D) Biological Barriers
- Q.211 Immediate protection is obtained from**
 A) Passive Immunity C) Vaccination
 B) Active Immunity D) Natural Activity Immunity
- Q.212 The immunity in which T-cells recognize the antigens or micro-organisms is known as**
 A) Tissue Grafting C) Cell Mediated Immunity / Response
 B) Phagocytosis D) Hormonal Immunity / Response
- Q.213 Oxidative phosphorylation, synthesis of ATP in the presence of oxygen occurs in:**
 A) All Types of Cells C) All Primitive Cells
 B) All Anaerobic Cells D) All Aerobic Cells
- Q.214 Glycolysis is the breakdown of glucose into two molecules of**
 A) Glycerate C) Pyruvate
 B) Lactic Acid D) Succinic Acid
- Q.215 Before entering Krebs's cycle, the pyruvate is first decarboxylated and oxidized into**
 A) Alpha Ketoglutaric Acid C) Glyceric Acid
 B) Citric Acid D) Acetic Acid
- Q.216 Some electron from the second primary acceptor may pass back to chlorophyll molecules by electron carrier system, yielding ATP. This process is called**
 A) Phosphorylation C) Non-Cyclic Phosphorylation
 B) Photophosphorylation D) Cyclic Phosphorylation
- Q.217 Z-scheme is used for**
 A) Non-Cyclic Photophosphorylation C) Both Cyclic and Non-Cyclic Photophosphorylation
 B) Cyclic Photophosphorylation D) Oxidative Phosphorylation
- Q.218 The common vectors used in recombinant DNA technology are**
 A) Probes C) Plasmids
 B) Palindromes D) Prions
- Q.219 The enzyme used to isolate gene from DNA is**
 A) Helicase C) Restriction Enzyme
 B) Reverse Transcriptase D) DNA Polymerase
- Q.220 Which one of the following enzymes is temperature insensitive?**
 A) DNA Polymerase I C) DNA Polymerase III
 B) Taq Polymerase D) RNA Polymerase



UNIVERSITY OF HEALTH SCIENCES, LAHORE

Entrance Test – 2011

For admission to Medical / Dental Institutions of the Punjab

ANSWER KEY

The answer key to the questions of Entrance Test 2011 is being released.

Candidates can calculate their scores with the help of carbon copy of their response forms. **Each correct answer carries 05 marks whereas one mark will be deducted from the total score for each wrong answer. Unattempted question carries zero marks.** Complaints/ queries will be dealt only after the declaration of official result of the Entrance Test by the University. No request in this regard will be entertained before that.

Q.No.	Ans
ID	D
1	B
2	B
3	B
4	B
5	D
6	B
7	B
8	C
9	D
10	A
11	B
12	A
13	A
14	A
15	D
16	A
17	C
18	A
19	C
20	B
21	A
22	D
23	A
24	D
25	D
26	A
27	A
28	D
29	B
30	B
31	B
32	C
33	D
34	C
35	D
36	A
37	C
38	C
39	D
40	A
41	C
42	B
43	D
44	D
45	C

Q.No.	Ans
46	D
47	B
48	A
49	D
50	C
51	C
52	C
53	D
54	D
55	B
56	A
57	D
58	A
59	D
60	D
61	A
62	D
63	C
64	D
65	C
66	B
67	A
68	A
69	D
70	A
71	C
72	B
73	A
74	C
75	A
76	A
77	A
78	B
79	B
80	A
81	A
82	B
83	D
84	A
85	C
86	A
87	D
88	B
89	D
90	A
91	A

Q.No.	Ans
92	A
93	D
94	A
95	B
96	B
97	D
98	A
99	A
100	C
101	D
102	D
103	A
104	A
105	B
106	C
107	D
108	A
109	D
110	D
111	A
112	D
113	C
114	C
115	C
116	B
117	B
118	B
119	C
120	D
121	C
122	C
123	D
124	A
125	A
126	C
127	B
128	B
129	C
130	D
131	A
132	A
133	C
134	A
135	A
136	A
137	A

Q.No.	Ans
138	A
139	B
140	B
141	A
142	C
143	B
144	C
145	C
146	B
147	A
148	A
149	A
150	C
151	B
152	C
153	D
154	B
155	B
156	A
157	A
158	C
159	A
160	D
161	B
162	A
163	A
164	D
165	D
166	B
167	C
168	D
169	A
170	A
171	B
172	A
173	A
174	A
175	B
176	D
177	C
178	B
179	A
180	D
181	D
182	C
183	C

Q.No.	Ans
184	B
185	A
186	B
187	D
188	D
189	A
190	A
191	B
192	B
193	B
194	A
195	A
196	B
197	C
198	C
199	D
200	A
201	D
202	B
203	B
204	A
205	A
206	A
207	B
208	D
209	D
210	A
211	A
212	C
213	C
214	C
215	D
216	D
217	A
218	C
219	C
220	B