

UNIVERSITY OF HEALTH SCIENCES, LAHORE



MEDICAL ENTRANCE TEST-2009

TOTAL TIME: 150 Minutes

Entrance Test for Candidates seeking Admission to Medical & Dental Institutions in Punjab



Shuffled Question Papers are Colour-Coded. There are in total FIVE Shuffled Question Papers in Navy, Brown, Pink, Red and Green Colours. It is important that you get and use the MCQ Response Form of the Colour corresponding to the Colour of your Question Booklet.

GENERAL INSTRUCTIONS:

In order to ensure a fair chance to every candidate and to conduct the test efficiently, the candidate must follow the instructions given in this booklet and by the Superintendent.

- 1. DO NOT FOLD THE MCQ RESPONSE FORM.**
2. One candidate shall only be Issued **One MCQ Response Form of the Colour corresponding to the Colour of the Question Booklet.**
3. The Entrance Test will start exactly at **9:00 a.m.**
4. All answers must be given by completely filling the Circles having the Correct Answer i.e. A, B, C, or D with Blue Ball Pen Only. Filling of circles incompletely, multiple responses and unnecessary marks may mislead the Optical Mark Reader Machine and your Responses may not be evaluated correctly for which the University will NOT be responsible.
5. No mobile phones, notes, books, weapons, armaments or any device that can be used for communication or to cause disturbance in the course of the Test is permitted within the premises of the "Centre".
6. During the Test, candidates will not talk, whisper or turn their eyes or head away from their own papers.
7. Any evidence of cheating or non-compliance of instructions will disqualify the candidate from the Test and his / her name will be removed from the List of the Candidates.
8. The candidates should carefully think about their answers before filling the circles on the Response Form. Once an answer has been given on the Response Form, the candidate will not be permitted to change any of his / her answers in any way.



The candidates should not mark Answers on the Question Paper. All answers must be given on the MCQ Response Form Only by filling the relevant Circle with Blue Ball Pen. Erasing or Filling another Circle for the same answer shall be considered as an Incorrect Response.



Whereas the Content of Paper is Same for all the Students of Respective Groups, the MCQs and their Response Stems are shuffled to Discourage Cheating.

9. All rough work must be done on the back side of the Question Paper **(not on the MCQ Response Form)**.
10. There will be **Negative Marking** in the Test. Each Correct Answer carries Five (05) Marks. However, for each Wrong Answer One (01) Mark will be deducted.
12. The Seven Digit Roll Number should be entered carefully in the designated area both on MCQ Question Paper and the MCQ Response Form where the Corresponding Circles under each Digit should also be shaded as shown in the Examples Below.
13. The MCQ Response Form is to be returned together with the MCQ Question Paper at the end of the Entrance Test.
14. When the Instructor says **STOP**, the candidates should stop writing and turn over their Question Booklets and MCQ Response Forms.
15. No candidate will be allowed to leave the Examination Centre before the end of the Entrance Test.
16. At the end of the Entrance Test the candidates are requested to fill in the "Feed Back Form" which will help the University improve its Services to the Public in Future. **This "Feed Back Form" is NOT PART of the Evaluation Process.**

Examples:

Roll No.	Roll No.	Roll No.		A	B	C	D	
0 1 0 0 0 0 1	1 1 0 0 8 4 1	0 7 5 3 9 7 0	1	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Q. (1). The cellular layer of the periosteum contains:
<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	A) Osteocytes
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	B) Osteoblasts
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	C) Osteoclasts
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	D) Fibroblasts
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	7	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	9	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	10	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(Correct Answer is Option "B")
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	11	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	13	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	14	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	



You are to remain seated till all the MCQ Response Forms and Question Booklets have been collected from the Candidates and the Supervisor announces that it is alright for you to leave. Ensure that you have returned the MCQ Response Form and Questions Booklet to the Invigilating Staff. Failure to comply will lead to AUTOMATIC DISQUALIFICATION from MCAT 2009.

University of Health Sciences, Lahore



 Roll No. of Candidate

 Signature of Candidate

MEDICAL ENTRANCE TEST-2009

For F.Sc. Students Only

Total MCQs: 220

Max. Marks: 1100

Time Allowed: 150 Minutes

PHYSICS

Q.1 When a helium atom loses an electron it becomes:

- A) An alpha particle.
 B) Proton.
 C) A positive helium ion.
 D) A negative helium ion.

Q.2 Beta ray emitted by a radioactive substance is:

- A) An electron which was existing outside the nucleus.
 B) An electron which was existing inside the nucleus.
 C) An electron emitted by the nucleus as a result of the decay of neutron inside the nucleus.
 D) A pulse of electromagnetic wave.

Q.3 An electric charge in uniform motion produces:

- A) An electric field.
 B) A magnetic field.
 C) Both magnetic and electric fields.
 D) Neither magnetic nor electric fields.

Q.4 What is emitted by a hot metal filament in a cathode ray tube?

- A) X-ray.
 B) Proton.
 C) Electron.
 D) Photon.

Q.5 If the mass of the bob of a pendulum is doubled its time period is:

- A) Halved.
 B) Doubled.
 C) Unchanged.
 D) Increases four times.

Q.6 The centre of Newton rings is dark due to:

- A) Polarization.
 B) Destructive interference.
 C) Constructive interference.
 D) Reflection.

Q.7 Which one is most stable element on the basis of binding energy:

- A) Sn.
 B) Ba.
 C) Kr.
 D) Fe.

Q.8 Resistance in RC circuit of time constant 2 seconds in 1000 Ohm. What is value of C in the circuit?

- A) 2 μ farad.
 B) 20 μ farad.
 C) 200 μ farad.
 D) 2000 μ farad

Q.9 The Lenz's law refers to induced.....

- A) emf.
 B) Resistance.
 C) Shear.
 D) Currents.

Q.10 In which of the following, output is similar to NAND gate if input A=0 and input B=1.

- A) NOR.
 B) XNOR.
 C) XOR.
 D) Both B and C.

Q.11 For atomic hydrogen spectrum, which of the following series lies in visible region of electromagnetic spectrum?

- A) Lyman series.
 B) Paschen series.
 C) Balmer series.
 D) Bohr series.

Q.12 ----- are the particles that experience strong nuclear force

- A) Electrons.
 B) Muons.
 C) Neutrinos.
 D) Neutrons.

(Continued)

- Q.13 The vertical velocity of ball thrown upward ----- with time.**
A) decreases linearly. C) Doubles.
B) remains constant. D) Decreases parabolically.
- Q.14 The force required to bend the normally straight path of a particle into a circular path is called ----- force.**
A) Traveling. C) Centrifugal.
B) Bending. D) Centripetal.
- Q.15 A disc at rest without slipping, rolls down a hill of height (3 x 9.8)m. What is its speed in m/sec when it reaches at the bottom?**
A) 11.4. C) 22.8.
B) 19.6. D) 9.8.
- Q.16 Tuning of the radio is the best example of electrical -----.**
A) Resonance. C) Current.
B) Resistance. D) None of these.
- Q.17 A standing wave pattern is formed when the length of string is an integral multiple of ----- wavelength.**
A) Triple. C) Half.
B) Full. D) Double.
- Q.18 Which of the following lights travels the fastest in optical fibres?**
A) Visible light. C) Ultra-violet.
B) Invisible infra-red. D) Ordinary light.
- Q.19 The algebraic sum of potential changes in a closed circuit is zero is Kirchoff's ----- rule.**
A) First. C) Third.
B) Second. D) None of these.
- Q.20 In LED when an electron combines with a ----- during forward bias conduction, a photon of visible light is emitted.**
A) High voltage. C) Hole.
B) Photon. D) Positron.
- Q.21 For photons of energy greater than 1.02 MeV the probability of pair production occurrence ----- as the energy increases.**
A) Increase. C) Reduces to half.
B) Completely diminishes. D) Remains unchanged.
- Q.22 The neutron is assumed to be made of**
A) One up quark and two down quarks. C) Two up quarks and one down quark.
B) Two up quarks and two down quarks. D) One up quark and one down quark.
- Q.23 An ----- missile is called a ballistic missile.**
A) Un-powered and guided. C) Powered and guided.
B) Un-guided and powered. D) Un-powered and un-guided.
- Q.24 Two cylinders of equal mass are made from same material. The one with the larger diameter accelerates ----- the other under the action of same torque.**
A) Faster than. C) Equal to.
B) Slower than. D) None of these.
- Q.25 The angular frequency of simple pendulum is directly proportional to -----**
A) l . C) \sqrt{l} .
B) $1/l$. D) $\sqrt{1/l}$.
- Q.26 Two waves of slightly different frequencies and traveling in same direction produce -----**
A) Interference. C) Stationary waves.
B) Polarization. D) Beats.
- Q.27 A single mode step index fibre has core of about ----- μm diameter**
A) 50 to 1000. C) 30.
B) 50. D) 5.

- Q.28 A 5 Ohm resistor is indicated by a single ----- color band around its body.**
 A) Red. C) Blue.
 B) Green. D) Brown.
- Q.29 Practically ----- current flows in a reverse biased p-n junction.**
 A) No. C) Few milliamperes.
 B) Very large. D) Both A and C.
- Q.30 Cesium coated oxidized silver emits electrons for ----- light.**
 A) Infrared. C) Visible.
 B) Ultraviolet. D) Green.
- Q.31 The cobalt is absorbed by**
 A) Bones. C) Liver.
 B) Skin. D) Thyoid gland.
- Q.32 In a step down transformer the output current -----**
 A) Is reduced. C) Remains same.
 B) Is increased. D) None of these.
- Q.33 Force in terms of base units is expressed as**
 A) kg ms^{-2} . C) $\text{kg m}^2\text{s}^{-3}$.
 B) $\text{kg m}^2\text{s}^{-2}$. D) none of these.
- Q.34 100 joules work has been done by an agency in 10 seconds. What is power of agency?**
 A) 1000 watt. C) 10 watt.
 B) 100. D) 0.10 watt.
- Q.35 The acceleration is proportional to the displacement and is directed towards mean position in ----- motion.**
 A) Gravity. C) Uniform.
 B) Simple harmonic. D) Projectile.
- Q.36 In gases the speed of sound is inversely proportional to ----- of the density when other factors are same.**
 A) Square root. C) Third power.
 B) Square. D) Third root.
- Q.37 A watch maker uses ----- to repair the watches.**
 A) Telescope. C) Convex lens.
 B) Convex mirror. D) Concave lens.
- Q.38 A 2m long pipe is open at both ends. What is second harmonic frequency?**
 A) 42.5 Hz. C) 220 Hz.
 B) 85 Hz. D) None of these.
- Q.39 A wire has resistance 100 Ohm at 0°C and 200 Ohm at 100°C. What is its temperature coefficient in K-1?**
 A) -0.01. C) 0.01.
 B) -1/273. D) 1/273.
- Q.40 The net magnetic field created by the electrons within an atom is due to the field created by their ----- motion.**
 A) Orbital. C) Orbital & spin.
 B) Spin. D) Orbital x spin.
- Q.41 At high temperature, the proportion of ----- wavelength radiation increase.**
 A) AM radio. C) Shorter.
 B) Long radio. D) Both A and C.
- Q.42 In photoelectric effect removal of photons is observed at ----- energies.**
 A) Low. C) Intermediate.
 B) High. D) Both A and C.
- Q.43 Which device is the most efficient?**
 A) Nuclear reactor. C) Silicon solar cell.
 B) Storage battery. D) Dry battery cell.

(Continued)

Q.44 The units of E in $E=mc^2$ are

- A) kg m s^{-2} .
- B) $\text{kg m}^2 \text{s}^{-2}$.
- C) N m s^{-2} .
- D) both B and C.

Q.45 Work done on a body equals change in its ----- energy.

- A) Total.
- B) Potential.
- C) Kinetic.
- D) All of these.

Q.46 A pipe varies uniformly in diameter from 2 m to 4 m. An incompressible fluid enters the pipe with velocity 16m/sec. What is velocity of fluid when it leaves the pipe?

- A) 64 m/sec.
- B) 32 m/sec.
- C) 8 m/sec.
- D) 4 m/sec.

Q.47 Transverse waves can not be setup in -----

- A) Metals.
- B) Solids.
- C) Fluids.
- D) Soil.

Q.48 The ratio of the ----- is called magnification.

- A) Image size to object size.
- B) Object size to image size.
- C) Eyepiece size to object size.
- D) None of these

Q.49 Which of the following has the highest resistivity?

- A) Germanium.
- B) Silver.
- C) Copper.
- D) Platinum.

Q.50 An n-type semi-conductor is made by doping silicon crystal with -----

- A) Indium.
- B) Aluminium.
- C) Arsenic.
- D) Both B and C.

Q.51 Objects can not be accelerated to the speed of light in free space is consequence of

- A) Mass variation.
- B) Energy-mass relationship.
- C) Inertia forces.
- D) All of these.

Q.52 A certain radioactive mass decays from 64 gm to 2 gm in 20 days. What is its half life?

- A) 5 days.
- B) 4 days.
- C) 10 days.
- D) 6 days.

Q.53 If inductance is denoted by L and resistance by R, which of the following is true for a choke?

- A) R is large, L is very small.
- B) R is very small, L is large.
- C) both R and L are large.
- D) both R and L are very small.

Q.54 A force $2i+j$ has moved its point of application from (2,3) to (6,5). What is work done?

- A) -10.
- B) +10.
- C) -18.
- D) +18.

Q.55 The escape velocity corresponds to ----- energy gained by body, which carries it to an infinite distance from the surface of earth.

- A) Total.
- B) Potential.
- C) Initial kinetic.
- D) None of these.

Q.56 The drag force decreases as the speed of an object moving through fluid -----

- A) Increases.
- B) Decreases.
- C) Remains constant.
- D) Both B and C.

Q.57 Light year is a measure of

- A) Distance.
- B) Time.
- C) Intensity of light.
- D) Velocity.

Q.58 A yellow light of wavelength 500 mm emitted by a single source passes through two narrow slits 1 mm apart. How far apart are two adjacent bright fringes when interference is observed on a screen 10 m away?

- A) 5 mm.
- B) 1.33 mm.
- C) 0.5 mm.
- D) 50 mm.

Q.59 The heat produced by a current I in the wire of resistance R during time interval t is

- A) I^2/Rt .
- B) I^2Rt .
- C) $I^2/R/t$.
- D) IR^2t .

Q.60 Which of the following is the most ductile?

- A) Glass.
- B) Copper.
- C) Cast iron.
- D) High carbon steel.

CHEMISTRY

- Q.61 Which type of bonding is present in NH_4Cl**
 A) Ionic. C) Coordinate covalent.
 B) Covalent. D) All of these.
- Q.62 When CuSO_4 is electrolyzed in aqueous solution using copper electrodes, then the substance which deposits at the cathode is:**
 A) Copper metal. C) Hydrogen.
 B) Copper ions. D) Oxygen.
- Q.63 Aldehydes can be synthesized by the oxidation of**
 A) Primary alcohols. C) Organic acids.
 B) Secondary alcohols. D) Inorganic acids.
- Q.64 The products of the fermentation of a sugar are ethanol and**
 A) Water. C) Carbon dioxide.
 B) Oxygen. D) Sulfur dioxide.
- Q.65 -----serve as carriers of heredity from one generation to the other.**
 A) Lipids C) Formaldehydes
 B) Caseins D) Nucleoproteins
- Q.66 -----extraction is controlled by partition law.**
 A) Iodine C) Solvent
 B) Benzoic acid D) Stationery
- Q.67 The process of effusion is best understood by -----law.**
 A) Graham's C) Boyle's
 B) Charles's D) none of these
- Q.68 -----has dipole moment.**
 A) CO C) Benzene
 B) CO_2 D) All of these
- Q.69 -----is used as catalyst in Haber's process for NH_3 gas manufacture.**
 A) Iron C) Copper
 B) Carbon D) Silver
- Q.70 In many of its properties----- is quite different from the other alkali metals.**
 A) Li C) Na
 B) Be D) K
- Q.71 Which element forms long chains alternating with oxygen?**
 A) Carbon C) Nitrogen
 B) Silicon D) All of these
- Q.72 The percentage of carbon in medium carbon steel is**
 A) 0.7-1.5 C) 0.2-0.7
 B) 0.1-0.2 D) 1.6-2.00
- Q.73 Name the rare halogen among the following.**
 A) F C) I
 B) Cl D) At
- Q.74 Which bond will break when electrophile attacks an alcohol?**
 A) O - H C) Both A and B
 B) C - O D) None of these
- Q.75 The extent of un-saturation in a fat is expressed as its**
 A) Acid number C) Saponification number
 B) Iodine number D) None of these
- Q.76 The process of filtration is used to separate-----particles from liquids.**
 A) Radial C) Insoluble
 B) Angular D) Soluble

(Continued)

- Q.77 London forces are very significant in-----.**
 A) Sulphur
 B) Phosphorous
 C) Argon
 D) Sugar
- Q.78 Which of the following formation is endothermic reaction?**
 A) $2\text{H}_2(\text{g}) + \text{O}_2(\text{g}) \longrightarrow 2\text{H}_2\text{O}(\text{l})$
 B) $\text{C}(\text{s}) + \text{O}_2(\text{g}) \longrightarrow \text{CO}_2(\text{g})$
 C) $\text{N}_2(\text{g}) + \text{O}_2(\text{g}) \longrightarrow \text{N}_2\text{O}_2(\text{g})$
 D) None of these
- Q.79 Name the partially miscible liquids from the following?**
 A) Alcohol-ether
 B) Nicotine-water
 C) Benzene-water
 D) Both A ,B
- Q.80 AlI_3 is electrically a -----.**
 A) Conductor
 B) Non-conductor
 C) Semiconductor
 D) None of these
- Q.81 The elements of IIIA to VIIIA subgroups except He are known as ----- block elements.**
 A) q
 B) s
 C) p
 D) None of these
- Q.82 Concentrated nitric acid gives-----when it reacts with tin.**
 A) Nitric oxide
 B) Meta stannic acid
 C) Ammonium nitrite
 D) None of these
- Q.83 Sulphuric acid is used to manufacture**
 A) HCl and HNO_3
 B) H_3PO_4
 C) both A and B
 D) both HCl and 2COOH
- Q.84 Alkanes containing-----carbon atoms are waxy solids.**
 A) upto 4
 B) 5 to 17
 C) 18 or more
 D) None of these
- Q.85 Which of the following is used to make chloral hydrate?**
 A) Acetaldehyde
 B) Formaldehyde
 C) None of these
 D) Both A & B
- Q.86 Ten moles of hydrogen are allowed to react with 6 moles of oxygen. How much water will be obtained from reaction on complete consumption of one gas?**
 A) 10 moles
 B) 8 moles
 C) 6 moles
 D) 4 moles
- Q.87 The highest temperature a substance can exist as----- is called its critical temperature.**
 A) Solid
 B) Liquid
 C) Gas
 D) Isotope
- Q.88 -----hybridization leads to a regular tetrahedral structure.**
 A) sp^3
 B) sp^2
 C) sp
 D) All of these
- Q.89 Osmotic pressure of a solution is-----property.**
 A) Obligative
 B) Fractional
 C) Colligative
 D) Automated
- Q.90 Magnesium reacts with hydrogen at high pressure in the presence of catalyst----- forming magnesium hydride.**
 A) Dolomite
 B) MgI_2
 C) Mg_3N_2
 D) Epsom salt
- Q.91 Which metal is commonly used to remove air bubbles from molten metals?**
 A) Aluminium
 B) Copper
 C) Sodium
 D) Calcium
- Q.92 With increase in number of unpaired electrons, paramagnetism**
 A) Increases
 B) Decreases
 C) Remains constant
 D) Decreases then increases
- Q.93 Which element has the largest number of allotropic forms?**
 A) Phosphorous
 B) Sulphur
 C) Oxygen
 D) both A & C

- Q.94 Which of the following bonds has minimum bond energy?**
 A) C – F
 B) C – Cl
 C) C – I
 D) C – Br
- Q.95 Which of the following does not react with water?**
 A) Li
 B) Na
 C) Mg
 D) Be
- Q.96 $\text{Al}_2\text{O}_3(\text{SiO}_2) \cdot 2\text{H}_2\text{O}$ is called**
 A) Clay
 B) Talc
 C) Asbestos
 D) None of these
- Q.97 CaO forms fertilizer slag by reacting with**
 A) P_2O_5
 B) Fe_2O_3
 C) Silica
 D) FeO
- Q.98 -----is colorless volatile liquid at room temperature.**
 A) HCl
 B) HF
 C) HI
 D) HBr
- Q.99 Hydrogen passed through phenol at 150°C in the presence of ---- catalyst gives cyclohexanol..**
 A) Tin
 B) Nickel
 C) Iron
 D) Sodium
- Q.100 Ethanol-water is -----mixture.**
 A) Azeotropic
 B) Ideal
 C) Benedict's
 D) Aliphatic
- Q.101 The mobile phase in paper chromatography is usually**
 A) An organic liquid
 B) Sulphuric acid
 C) Water
 D) Silver nitrate
- Q.102 The amount of heat absorbed by one mole of solid at 1 atm when it melts into liquid form is denoted by-----.**
 A) ΔH_v
 B) ΔH_f
 C) ΔH_1
 D) ΔH_s
- Q.103 In synthetic fibres-----bonding is responsible for tensile strength.**
 A) Nitrogen
 B) Hydrogen
 C) Oxygen
 D) None of these
- Q.104 Boiling point of HF is----- H_2O .**
 A) Lower than
 B) Higher than
 C) Equal to
 D) Almost same as
- Q.105 -----is necessary for development of leaves and it tends to accumulate in leaves and bark.**
 A) NO_2
 B) Calcium
 C) Gypsum
 D) Nitrogen
- Q.106 Which of the following is pale yellow to reddish yellow in color?**
 A) Pb_2O
 B) PbO_2
 C) PbO
 D) $2\text{PbCO}_3 \cdot \text{Pb}(\text{OH})_2$
- Q.107 In which of the following carbon is double bonded with itself?**
 A) Alkane
 B) Ether
 C) Alkene
 D) Alkyne
- Q.108 In this process higher hydrocarbons can be cracked at lower temperature and lower pressure.**
 A) Thermal cracking
 B) Catalytic cracking
 C) Steam cracking
 D) Reforming
- Q.109 Acetic acid is called-----acid.**
 A) Methanoic
 B) Propanoic
 C) Ethanoic
 D) Butanoic
- Q.110 Na may be denoted by ----- electron configuration notation**
 A) $1s^2 2s^1$
 B) $[\text{Ar}] 4s^1$
 C) $[\text{Ne}] 3s^1$
 D) None of these

(Continued)

Q.111 Which is the best drying agent in desiccators?

- A) KOH
- B) Gypsum
- C) CaCl_2
- D) silica sand

Q.112 100 m³ of a gas at 3 atm pressure and 27°C is transferred to a chamber of 300 m³ volume maintained at a temperature of 327°C. What will be the pressure in chamber?

- A) 6 atm
- B) 4 atm
- C) 2 atm
- D) 1 atm

Q.113 The crystals of ----- are ionic solids.

- A) Sugar
- B) Iron
- C) Diamond
- D) NaCl

Q.114 Which material possesses the highest pH?

- A) Soft drinks
- B) Bananas
- C) Milk of magnesia
- D) Sea water

Q.115 The electron present in a particular orbit ----- energy.

- A) Releases
- B) Does not radiate
- C) Absorbs
- D) None of these

Q.116 $\text{Al}_2\text{F}_2\text{SiO}_4$ is named as

- A) Gibbsite
- B) Emerald
- C) Bauxite
- D) Cryolite

Q.117 Name the oxide in which N has the highest oxidation number.

- A) Nitrous oxide
- B) Nitric oxide
- C) Nitrogen peroxide
- D) Nitrous anhydride

Q.118 Sulphur has oxidation state of -----

- A) ± 2
- B) + 4 and +6
- C) None of these
- D) Both A and B

Q.119 $\text{CH}_3\text{-O-CH}_3$ is example of ----- isomerism.

- A) Metamerism
- B) Functional group
- C) Chain
- D) Position

Q.120 ----- are product of reaction of an alcohol and aromatic bi-functional acids.

- A) Acrylic resins
- B) Polyester resins
- C) PVCs
- D) Polyamide resins

ENGLISH

Q.121 He was _____ of all valuable possessions.

- A) Robbed.
- B) Stolen.
- C) Pinched.
- D) Established.

Q.122 The presence of armed guards _____ us from doing anything disruptive.

- A) Defeated.
- B) Excited.
- C) Irritated.
- D) Prevented.

Q.123 Our flight was _____ from Lahore to Islamabad airport

- A) Diverted.
- B) Reflected.
- C) Deflected.
- D) Shifted.

Q.124 I am _____ forward to our picnic scheduled in next month

- A) Looking.
- B) Planning.
- C) Seeing.
- D) Going.

➡ **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 bubble / circle corresponding to that letter under the segment in the MCQ Response Form.*

- Q.125** They did not guess how closely he had kept in touch with across the road.
A B C D
- Q.126** He proved that if only germs were excluded of wounds, inflammation was averted.
A B C D
- Q.127** The man felt his hair flutter and the tissues of his body drew tight as if he were standing at the centre of a vacuum.
A B C D
- Q.128** He came to the hurdles that he remember, over which once he had one so easy a victory.
A B C D
- Q.129** What is meant by birth-rate and death-rate and how do they effect the population?
A B C D
- Q.130** She had left him with a calmness and a poise that accord well with his own inward emotions.
A B C D

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

- Q.131**
- A) He lacked both the training and the equipment needed in the job.
 - B) He lacked both the training and the equipment needed by the job.
 - C) He lacked both the training and the equipment needed on the job.
 - D) He lacked both the training and the equipment needed for the job.
- Q.132**
- A) They tried to pacify him for kindness and affection.
 - B) They tried to pacify him in kindness and affection.
 - C) They tried to pacify him by kindness and affection.
 - D) They tried to pacify him with kindness and affection.
- Q.133**
- A) Then he sat down in corner and remained quiet.
 - B) Then he sat down in corner and remained quite.
 - C) Then he sat down in corner and remain quiet.
 - D) Then he sat down in corner and remained quiet.
- Q.134**
- A) He was drenched with the hotness of his fear.
 - B) He was drenched in the hotness of his fear.
 - C) He was drenched by the hotness of his fear.
 - D) He was drenched off the hotness of his fear.
- Q.135**
- A) Why did you disagree with me?
 - B) Why did you disagree to me?
 - C) Why did you disagree on me?
 - D) Why did you disagree by me?
- Q.136**
- A) Do not stuff your head by things you do not understand.
 - B) Do not stuff your head with things you do not understand.
 - C) Do not stuff your head for things you do not understand.
 - D) Do not stuff your head in things you do not understand.

(Continued)

Q.137

- A) A day later he reached his first glimpse of Lahore.
- B) A day later he took his first glimpse of Lahore.
- C) A day later he found his first glimpse of Lahore.
- D) A day later he caught his first glimpse of Lahore.

Q.138

- A) This will have a bad impact to the economy.
- B) This will have a bad impact on the economy.
- C) This will have a bad impact at the economy.
- D) This will have a bad impact over the economy.

Q.139

- A) It would save him from dying of thirst.
- B) It would save him from dying from thirst.
- C) It would save him from dying with thirst.
- D) It would save him from dying by thirst.

Q.140

- A) All this flashed by his mind in an instant of protest.
- B) All this flashed on his mind in an instant of protest.
- C) All this flashed through his mind in an instant of protest.
- D) All this flashed by off mind in an instant of protest.



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 Bubble / Circle on the MCQ Response Form.

Q.141 VEXING

- A) Annoying
- B) Aggressive
- C) Viable
- D) Waxy

Q.142 VAGUE

- A) Respectful
- B) Uncertain
- C) Warlock
- D) Snow white

Q.143 MANGLED

- A) Dodged
- B) Grained
- C) Indisputable
- D) Damaged

Q.144 PRODIGIOUS

- A) Productive
- B) Enormous
- C) Prudential
- D) Waddle

Q.145 ASTOUNDED

- A) Shocked
- B) Discarded
- C) Assured
- D) Attracted

Q.146 SAGACITY

- A) Foolishness
- B) Large City
- C) Onions
- D) Wisdom

Q.147 GRIM

- A) Gratis
- B) Restless
- C) Severe
- D) Grater

Q.148 INDOLENTLY

- A) Lazily
- B) Indecently
- C) Ideally
- D) Gaily

Q.149 PERISH

- A) Furious
- B) Come to death
- C) Secret
- D) Frustrated

Q.150 DOZE

- A) Dogged
- B) Diet
- C) Sleep
- D) Medicine to be taken

BIOLOGY

- Q.151 Which of the following receptors produce sensation of pain?**
 A) Mechanoreceptor. C) Chemoreceptors.
 B) Nociceptors. D) Thermoreceptors.
- Q.152 When your finger accidentally gets caught in a door, the pain message is sent to your brain through _____.**
 A) Homeostasis. C) Caffeine.
 B) Sensory receptors. D) The medulla.
- Q.153 Neck has _____ type of joint.**
 A) Ball and socket. C) Hinge.
 B) Pivot. D) Fibrous.
- Q.154 End product of hemoglobin break down is:**
 A) Creatinine. C) Hypoxanthin.
 B) Bilirubin. D) Xanthin.
- Q.155 In what direction can a DNA polymerase work when catalyzing the addition of nucleotide monomers to build a strand of DNA?**
 A) From the 5' toward the 3' end of the new strand being assembled. C) From the 3' to the 5' end of the strand being assembled.
 B) From the replication centers in two directions called replication forks. D) In both directions if DNA ligase is present.
- Q.156 Which bond is the potential source of chemical energy for cellular activities?**
 A) C-N. C) C-H.
 B) C-O. D) H-O.
- Q.157 Sharks and rays are included in class:**
 A) Cyclostomata. C) Osteichthyes.
 B) Chondrichthyes. D) Tetrapoda.
- Q.158 In what stage of aerobic respiration are 2-carbon molecules oxidized completely to carbon dioxide?**
 A) Glycolysis. C) Krebs cycle.
 B) ETC. D) Calvin cycle.
- Q.159 Which of the following does not have specialized respiratory organs?**
 A) Hydra. C) Cockroach.
 B) Birds. D) Both A and B.
- Q.160 Humming birds belong to the category**
 A) Heterotherms. C) Ectotherms.
 B) Endotherms. D) None of these.
- Q.161 Syphilis is caused by**
 A) Neisseria gonorrhoeae. C) Treponema pallidum.
 B) Catsworm. D) Herpes simplex.
- Q.162 In moths male is -----.**
 A) Heterogametic. C) Homogametic.
 B) Dieogametic. D) Both B and C.
- Q.163 When carbon dioxide pressure increases the capacity of haemoglobin to hold oxygen-----.**
 A) Increases many fold. C) Remains constant.
 B) Decreases. D) Is doubled.
- Q.164 The soluble part of the cytoplasm is termed as**
 A) Cisternae. C) Endocytosis.
 B) Cytosol. D) Both A and B.
- Q.165 Name the enveloped RNA virus that causes infusion hepatitis.**
 A) HBV. C) HCV.
 B) HAV. D) None of these.
- Q.166 In general asexual reproduction is common in**
 A) Humans. C) Deuteromycota.
 B) Basidiomycota. D) Basidiospores.

(Continued)

Q.167 Name the vertebrates which are without jaws

- A) Osteichthyes.
- B) Cyclostomata.
- C) Chondrichthyes.
- D) None of these.

Q.168 The total inside capacity of lungs of adult human beings when fully inflated is

- A) 5 ml.
- B) 50 ml.
- C) 500 ml.
- D) 5000 ml.

Q.169 Which of the following belong to collenchyma cells?

- A) Fibers.
- B) Vessels.
- C) Sclereides.
- D) None of these.

Q.170 Which of the following promotes both leaf and fruit growths?

- A) Auxins.
- B) Gibberellins.
- C) Abscisic acid.
- D) Ethane.

Q.171 Name the external factor of growth in plants

- A) Carbon dioxide
- B) Water
- C) Hormones
- D) Nutrition

Q.172 The genes of blue opsin is present on

- A) Autosome 9.
- B) Autosome 7.
- C) Autosome 1.
- D) Autosome 3.

Q.173 The dew drops on tips of grass leaves is an example of

- A) Infestation.
- B) Bleeding.
- C) Exudation
- D) Imbibition

Q.174 Which of the following modifies proteins and lipids by adding carbohydrates

- A) Golgi Apparatus
- B) Polysome
- C) Plasma membrane
- D) None of these

Q.175 Which of the following are spiral-shaped bacteria?

- A) Cocci
- B) Bacilli
- C) Pseudomonas
- D) Vibrio

Q.176 Which of the following is used for lowering blood cholesterol?

- A) Neurospora
- B) Griseofulvin
- C) Aspergillus
- D) Lovastatin

Q.177 Which of the following are called placental mammals?

- A) Prototheria
- B) Eutheria
- C) Metatheria
- D) All of these

Q.178 The attraction among water molecules which hold water together is called

- A) Tension
- B) Adhesion
- C) Cohesion
- D) Ambibition

Q.179 Pick the paratonic movement from the following

- A) Nastic
- B) Turgor
- C) Growth
- D) Tactic
- E)

Q.180 Which of the following controls several automatic functions like breathing, heart rate and blood pressure?

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

Q.181 Which of the following has 40 chromosomes?

- A) Corn
- B) Sugarcane
- C) Frog
- D) Mouse

Q.182 The cell suspension culture of ----- produces quinine.

- A) Soybean
- B) Cinchona ledgeriana
- C) Digitalis lanata
- D) Luceferin

Q.183 Which one of the following is most slender in structure?

- A) Microtubules
- B) Micro filaments
- C) Intermediate filaments
- D) Both A and B

Q.184 Name the human tissues that contain about 85% water.

- A) Nerve cells
- B) Bone cells
- C) Brain cells
- D) None of these

- Q.185 Which of the following are colorless?**
 A) Chloroplasts
 B) Chromoplasts
 C) Leucoplasts
 D) None of these
- Q.186 Name the one involved in DNA replication.**
 A) Cysts
 B) Mesosomes
 C) Ribosomes
 D) Spores
- Q.187 Which of the following has rootless sporophytes?**
 A) Psilopsida
 B) Tracheophyta
 C) Lycopsida
 D) Sphenopsida
- Q.188 Chlorophylls absorb mainly ----- wave length.**
 A) Yellow
 B) Green
 C) Violet-blue
 D) Indigo
- Q.189 ----- did not have the adaptations to remove the flooding of their cells in fresh water,**
 A) Both B, D
 B) Hydrophytes
 C) None of B, D
 D) Xerophytes
- Q.190 Which of the following is made up of bones and cartilage?**
 A) Endoskeleton
 B) Exoskeleton
 C) Hydrostatic skeleton
 D) Both A and B
- Q.191 This disease is characterized by the decline in brain function.**
 A) Alzheimer's disease
 B) Parkinson's disease
 C) Epilepsy
 D) None of these
- Q.192 Prophase, metaphase and telophase are subdivisions of**
 A) Mitosis
 B) Karyokinesis
 C) Cytokinesis
 D) None of these
- Q.193 ----- organs are functionally different but structurally alike.**
 A) Analogous
 B) Unilougous
 C) Homologous
 D) Hypologous
- Q.194 Which of the following gives blue color with iodine?**
 A) Starch
 B) Cellulose
 C) Glycogen
 D) All of these
- Q.195 Herpes simplex is caused by ----- virus.**
 A) Enveloped RNA
 B) RNA tumor
 C) Glycogen
 D) Both B and C
- Q.196 Name the cyanobacteria which are helpful in fixing atmospheric nitrogen.**
 A) Heterocysts
 B) Nostoc
 C) Akinetes
 D) Hormogonia
- Q.197 Name the class that contains seedless plants.**
 A) Angiospermae
 B) Gymnosperm
 C) Paraphsys
 D) Filicineae
- Q.198 Which form of anaerobic respiration occurs in muscle cell of humans and other animals during extreme physical activities?**
 A) Alcoholic fermentation
 B) Lactic acid fermentation
 C) Glycolysis
 D) Pyruvic acid oxidation
- Q.199 How much water approximately is required to excrete 1 kg of ammonia nitrogen?**
 A) 500 ml
 B) 5 litre
 C) 300 litre
 D) 500 litre
- Q.200 Which disease causes immobility and fusion of vertebral joint?**
 A) Sciatica
 B) Spondylosis
 C) Disc slip
 D) Rickets
- Q.201 Which hormone continues to promote protein synthesis throughout the body even after the cease in growth?**
 A) TSH
 B) ADH
 C) ACTH
 D) STH
- Q.202 Position of a gene on the chromosome is called its**
 A) Phenotype
 B) Locus
 C) Junction
 D) Genotype

(Continued)

Q.203 Pick the biotic component from the following.

- A) Soil
- B) Water
- C) Atmosphere
- D) Animals

Q.204 The two strands in DNA are coiled----- to each other.

- A) Parallel
- B) Antiparallel
- C) Both A,B
- D) None of these

Q.205 Name the class without antennae.

- A) Arachnida
- B) Myriapoda
- C) Insecta
- D) Crustacea

Q.206 The African sleeping sickness is caused by -----.

- A) Entamoeba histolytica
- B) Trypanosoma
- C) Zooflagellates
- D) Ciliates

Q.207 Which of the following does not belong to angiospermic families?

- A) Picea
- B) Poaceae
- C) Rosaceae
- D) Fabaceae

Q.208 Name the nutrition resulted by feeding on dead and decaying matter.

- A) Saprophytic
- B) Parasitic
- C) Symbiotic
- D) Both B & C

Q.209 How many grams of nitrogen can be eliminated in the form of uric acid by 50 ml of water?

- A) 20
- B) 25
- C) 30
- D) 50

Q.210 Which disease is caused by low calcium in the blood?

- A) Tetany
- B) Cramp
- C) Muscle fatigue
- D) Sciatica

Q.211 It is known that red light ----- flowering in the long day plants.

- A) Synchronizes
- B) Inhibits
- C) Promotes
- D) Does not affect

Q.212 The color phenotype of the grain is the sum of individual effects of----- alleles.

- A) Six
- B) Five
- C) Four
- D) Five or three

Q.213 In ----- zone the light is insufficient to support photosynthesis.

- A) Desert
- B) Profundal
- C) Littoral
- D) All of these

Q.214 The optimum temperature for enzymes of human body is

- A) 32°F
- B) 46°C
- C) 313°K
- D) 37°C

Q.215 Which of the following damages wooden ships?

- A) Sepia
- B) Limax
- C) Teredo
- D) Ostrea

Q.216 Which of the following may build coral reefs along with coral animals?

- A) Myxomycota
- B) Brown algae
- C) Green algae
- D) Red algae

Q.217 Which of the following do not have a body cavity?

- A) Pseudocoelomata
- B) Acoelomata
- C) Coelomata
- D) None of these

Q.218 Name the neurotic disorder characterized by bouts of over eating of fattening foods.

- A) Bulimia nervosa
- B) Dyspepsia
- C) Anorexia nervosa
- D) Salmonella

Q.219 Which one of these is an example of tubular excretory system called metanephridium?

- A) Planeria
- B) Hydra
- C) Cockroach
- D) Earthworm

Q.220 Name the human tissues that contain about 85% water

- A) Nerve cells
- B) Bone cells
- C) Brain cells
- D) None of these