
NATIONAL ELIGIBILITY CUM ENTRANCE TEST (UG) – 2026

MOCK TEST PAPER – 02

Based on: Strategic Forecast & Forensic Analysis (2011–2020)

Duration: 3 Hours 20 Minutes

Maximum Marks: 720

SECTION A: PHYSICS (45 Questions)

Theme: Logic-Based Calculation & Experimental Skills

Q.1. (Kinematics)

A projectile is fired at an angle of 45° with the horizontal. Elevation angle of the projectile at its highest point as seen from the point of projection is:

- A) 45°
- B) 60°
- C) $\tan^{-1}(1/2)$
- D) $\tan^{-1}(\sqrt{3}/2)$

Q.2. (Experimental Skills)

In a screw gauge, the pitch is 1 mm and there are 100 divisions on the circular scale. When the faces are closed, the zero of the circular scale lies 4 divisions below the reference line.

The zero error is:

- A) +0.04 mm
- B) -0.04 mm
- C) +0.4 mm
- D) -0.4 mm

Q.3. (Laws of Motion)

A block of mass m is pressed against a vertical wall by a horizontal force F . If the coefficient of friction is μ , the minimum force required to prevent the block from sliding down is:

- A) $mg\mu$
- B) mg/μ
- C) μ/mg
- D) mg

Q.4. (Work, Energy)

The potential energy of a particle in a force field is $U = A/r^2 - B/r$, where A and B are positive constants. The position of stable equilibrium is:

- A) A/B
- B) $2A/B$

- C) B/A
- D) B/2A

Q.5. (Gravitation)

Two particles of mass m each revolve in a circle of radius r under their mutual gravitational attraction. Their speed is:

- A) $v(Gm/r)$
- B) $v(Gm/2r)$
- C) $v(Gm/4r)$
- D) $2v(Gm/r)$

(Questions 6 to 45 continue in the same clean format — no symbols issues)

SECTION B: CHEMISTRY (45 Questions)

Theme: Mechanism & Conceptual Inorganic

Q.46. (Structure of Atom)

Which set of quantum numbers is NOT possible?

- A) $n = 3, l = 2, m = -2, s = +1/2$
- B) $n = 4, l = 0, m = 0, s = -1/2$
- C) $n = 3, l = 3, m = -3, s = +1/2$
- D) $n = 5, l = 3, m = 0, s = +1/2$

Q.47. (Chemical Bonding)

Which of the following has the highest bond order?

- A) CN^-
- B) CN
- C) CN^+
- D) NO

Q.11. (AC Circuits)

The power factor of an LCR circuit at resonance is:

- A) Zero
- B) 0.5
- C) 1.0
- D) Infinity

Q.12. (Electromagnetic Waves)

Which of the following has the minimum wavelength?

- A) X-rays
- B) Gamma rays

- C) Microwaves
- D) Ultraviolet rays

Q.13. (Dual Nature of Radiation)

Light of frequency $1.5v_0$ (v_0 = threshold frequency) falls on a metal and produces photoelectrons of maximum kinetic energy K. If the frequency is increased to $3v_0$, the new maximum kinetic energy will be:

- A) 2K
- B) 3K
- C) 4K
- D) Greater than 2K (equal to 3K)

Q.14. (Atoms)

In a hydrogen atom, when an electron jumps from $n = 4$ to $n = 1$, the number of spectral lines obtained is:

- A) 3
- B) 4
- C) 6
- D) 10

Q.15. (Semiconductors)

For proper transistor action:

- A) All regions should have same doping
- B) All regions should have same size
- C) Emitter–base junction is forward biased and base–collector junction is reverse biased
- D) Both junctions are forward biased

Q.16. (Units & Dimensions)

Which pair has the same dimensions?

- A) Impulse and Momentum
- B) Force and Work
- C) Torque and Power
- D) Stress and Strain

Q.17. (Motion in One Dimension)

A stone is dropped from a tower. It travels 25 m in the last second of its motion. ($g = 10 \text{ m/s}^2$)

The height of the tower is:

- A) 45 m
- B) 50 m
- C) 60 m
- D) 80 m

Q.18. (Vectors)

The angle made by vector $A = i + j$ with the x-axis is:

- A) 30°
- B) 45°
- C) 60°
- D) 90°

Q.19. (Laws of Motion)

A monkey of mass 40 kg climbs a rope which can withstand a maximum tension of 600 N. In which case will the rope break?

- A) Climbing up with acceleration 6 m/s^2
- B) Climbing down with acceleration 4 m/s^2
- C) Climbing up with uniform speed
- D) Falling freely

Q.20. (Work, Energy)

A block of mass 2 kg moving at 10 m/s hits a spring of force constant 1000 N/m. Maximum compression is:

- A) 0.1 m
- B) 0.2 m
- C) 0.45 m
- D) 0.5 m

Q.21. (Gravitation)

The weight of a body at the center of the Earth is:

- A) Zero
- B) Infinite
- C) Same as on surface
- D) Half of surface weight

Q.22. (Properties of Matter)

Young's modulus of a wire is Y . If its length is doubled and radius is halved, the new Young's modulus is:

- A) Y
- B) $2Y$
- C) $4Y$
- D) $Y/2$

Q.23. (Thermodynamics)

For an isothermal expansion of an ideal gas:

- A) Change in internal energy is zero
- B) Change in enthalpy is zero

- C) Work done = $-2.303 nRT \log(V_2/V_1)$
- D) All of the above

Q.24. (Kinetic Theory of Gases)

The average kinetic energy of a gas molecule at 27°C is E. At 327°C it will be:

- A) 2E
- B) 4E
- C) E/2
- D) $\sqrt{2}E$

Q.25. (Oscillations)

The time period of a simple pendulum inside an orbiting satellite is:

- A) Zero
- B) Infinite
- C) Same as on Earth
- D) Double

Q.26. (Waves)

The phase difference between particle velocity and particle acceleration in SHM is:

- A) 0
- B) $\pi/2$
- C) π
- D) 2π

Q.27. (Electrostatics)

Two charges $+4q$ and $+q$ are separated by distance r . A charge Q is placed so that the system is in equilibrium. The position and value of Q are:

- A) $r/3$ from $+4q$, $Q = -4q/9$
- B) $2r/3$ from $+4q$, $Q = -4q/9$
- C) $r/2$ from $+4q$, $Q = -q$
- D) $2r/3$ from $+4q$, $Q = +4q/9$

Q.28. (Capacitors)

Energy density of an electric field is given by:

- A) $\frac{1}{2}CV^2$
- B) $\frac{1}{2}\epsilon_0 E^2$
- C) $Q^2/2C$
- D) $\epsilon_0 E$

Q.29. (Current Electricity)

The resistivity of a semiconductor with increase in temperature:

- A) Increases
- B) Decreases

- C) Remains constant
- D) First increases then decreases

Q.30. (Magnetism)

A galvanometer of resistance G is converted into an ammeter of range $0-I$ by using a shunt S .

The value of S is:

- A) $IgG / (I - Ig)$
- B) IgG / I
- C) $IG / (I - Ig)$
- D) $G / (I - Ig)$

Q.31. (Magnetism)

Magnetic field at the center of a circular coil of radius R carrying current I is B . If radius becomes $2R$, field becomes:

- A) $B/2$
- B) $2B$
- C) $B/4$
- D) $4B$

Q.32. (Electromagnetic Induction)

Lenz's law is a consequence of conservation of:

- A) Charge
- B) Energy
- C) Momentum
- D) Mass

Q.33. (Alternating Current)

In a purely capacitive AC circuit, the frequency of instantaneous power is:

- A) Same as source frequency
- B) Twice the source frequency
- C) Half the source frequency
- D) Zero

Q.34. (Ray Optics)

A convex lens is immersed in a liquid having the same refractive index as the lens. Its focal length becomes:

- A) Zero
- B) Infinite
- C) Same
- D) Decreased

Q.35. (Optics)

The blue colour of the sky is due to:

- A) Dispersion

- B) Scattering
- C) Interference
- D) Reflection

Q.36. (Wave Optics)

Two sources are coherent if they emit waves having:

- A) Same wavelength
- B) Same velocity
- C) Same frequency and constant phase difference
- D) Same amplitude

Q.37. (Dual Nature)

The work function of a metal depends on:

- A) Frequency of light
- B) Intensity of light
- C) Nature of metal surface
- D) Temperature

Q.38. (Atoms)

Radius of the first Bohr orbit is a_0 . Radius of the second orbit is:

- A) $2a_0$
- B) $4a_0$
- C) $8a_0$
- D) $a_0/2$

Q.39. (Nuclei)

Radiation having maximum penetrating power is:

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

Q.40. (Semiconductors)

A Zener diode is mainly used as a:

- A) Rectifier
- B) Amplifier
- C) Voltage regulator
- D) Oscillator

Q.41. (Logic Gates)

Which gate gives output 0 only when both inputs are 1?

- A) OR
- B) AND

- C) NAND
- D) NOR

Q.42. (Errors)

Percentage error in mass is 2% and in velocity is 3%. Percentage error in kinetic energy is:

- A) 5%
- B) 8%
- C) 1%
- D) 11%

Q.43. (Kinematics)

A body starts from rest with acceleration 2 m/s^2 . Displacement in the 5th second is:

- A) 25 m
- B) 9 m
- C) 10 m
- D) 5 m

Q.44. (Laws of Motion)

Rocket propulsion is based on conservation of:

- A) Energy
- B) Mass
- C) Linear momentum
- D) Angular momentum

Q.45. (Elasticity)

Hooke's law is valid up to:

- A) Yield point
- B) Breaking point
- C) Limit of proportionality
- D) Elastic limit

SECTION B: CHEMISTRY

Q.46. (Some Basic Concepts of Chemistry)

The number of significant figures in 0.00250 is:

- A) 2
- B) 3
- C) 4
- D) 5

Q.47. (Atomic Structure)

The maximum number of electrons that can be accommodated in an orbital is:

- A) 1

- B) 2
- C) 8
- D) 18

Q.48. (Periodic Table)

Which element has the highest electronegativity?

- A) Oxygen
- B) Nitrogen
- C) Fluorine
- D) Chlorine

Q.49. (Chemical Bonding)

The hybridization of carbon in ethyne (C_2H_2) is:

- A) sp
- B) sp^2
- C) sp^3
- D) dsp^2

Q.50. (States of Matter)

Real gases deviate from ideal behavior at:

- A) High temperature and low pressure
- B) Low temperature and high pressure
- C) High temperature and high pressure
- D) Low temperature and low pressure

Q.51. (Thermodynamics)

For an exothermic reaction:

- A) ΔH is positive
- B) ΔH is negative
- C) ΔH is zero
- D) ΔH is infinite

Q.52. (Equilibrium)

For a reaction at equilibrium:

- A) Forward reaction stops
- B) Backward reaction stops
- C) Rate of forward = rate of backward reaction
- D) Concentrations of reactants are zero

Q.53. (Redox Reactions)

Oxidation involves:

- A) Loss of electrons
- B) Gain of electrons

- C) Gain of protons
- D) Loss of protons

Q.54. (Hydrogen)

Heavy water is:

- A) H₂O
- B) D₂O
- C) H₂O₂
- D) T₂O

Q.55. (s-Block Elements)

Which of the following alkali metals has the highest ionization energy?

- A) Lithium
- B) Sodium
- C) Potassium
- D) Cesium

Q.56. (p-Block Elements)

Which of the following is the most acidic oxide?

- A) CO₂
- B) SO₂
- C) SO₃
- D) NO₂

Q.57. (Organic Chemistry – Basic Concepts)

The IUPAC name of CH₃–CH₂–OH is:

- A) Methanol
- B) Ethanol
- C) Propanol
- D) Ethanal

Q.58. (Hydrocarbons)

Which hydrocarbon shows geometrical isomerism?

- A) Ethane
- B) Ethene
- C) Propane
- D) But-2-ene

Q.59. (Environmental Chemistry)

The major cause of acid rain is:

- A) CO₂
- B) SO₂ and NO₂
- C) O₃
- D) CO

Q.60. (Solutions)

The unit of molality is:

- A) mol/L
- B) mol/kg
- C) g/L
- D) g/mol

Q.61. (Electrochemistry)

The SI unit of conductance is:

- A) Ohm
- B) Siemens
- C) Volt
- D) Ampere

Q.62. (Chemical Kinetics)

The rate constant of a reaction depends on:

- A) Concentration
- B) Temperature
- C) Pressure only
- D) Volume

Q.63. (Surface Chemistry)

Which of the following is an example of adsorption?

- A) Dissolving sugar in water
- B) Rusting of iron
- C) Gases sticking to charcoal
- D) Melting of ice

Q.64. (Metallurgy)

The process used for concentration of sulphide ores is:

- A) Leaching
- B) Froth flotation
- C) Roasting
- D) Calcination

Q.65. (Coordination Compounds)

The coordination number of central metal ion in $[\text{Co}(\text{NH}_3)_6]^{3+}$ is:

- A) 3
- B) 4
- C) 6
- D) 8

Q.66. (Haloalkanes)

Which of the following is most reactive towards SN1 reaction?

- A) CH_3Cl
- B) $\text{C}_2\text{H}_5\text{Cl}$
- C) $(\text{CH}_3)_2\text{CHCl}$
- D) $(\text{CH}_3)_3\text{CCl}$

Q.67. (Alcohols, Phenols & Ethers)

Phenol is more acidic than alcohol because:

- A) Phenoxide ion is stabilized by resonance
- B) Alcohol is neutral
- C) Phenol has higher molecular weight
- D) Alcohol forms hydrogen bonds

Q.68. (Aldehydes & Ketones)

Tollens' reagent is used to detect:

- A) Ketones
- B) Alcohols
- C) Aldehydes
- D) Carboxylic acids

Q.69. (Carboxylic Acids)

The functional group present in acetic acid is:

- A) $-\text{OH}$
- B) $-\text{COOH}$
- C) $-\text{CHO}$
- D) $-\text{CO}-$

Q.70. (Amines)

Aniline is:

- A) Aliphatic amine
- B) Aromatic amine
- C) Secondary amine
- D) Tertiary amine

Q.71. (Biomolecules)

The monomer unit of proteins is:

- A) Glucose
- B) Fatty acids
- C) Amino acids
- D) Nucleotides

Q.72. (Polymers)

PVC is a polymer of:

- A) Ethene
- B) Vinyl chloride

- C) Styrene
- D) Tetrafluoroethylene

Q.73. (Chemistry in Everyday Life)

Aspirin is used as:

- A) Antibiotic
- B) Analgesic
- C) Antiseptic
- D) Antacid

Q.74. (Solid State)

The number of atoms per unit cell in FCC lattice is:

- A) 2
- B) 4
- C) 6
- D) 8

Q.75. (Solutions)

Raoult's law is applicable to:

- A) Ideal solutions
- B) Non-ideal solutions
- C) Colloids
- D) Suspensions

Q.76. (Electrochemistry)

The standard electrode potential of hydrogen electrode is taken as:

- A) +1.0 V
- B) -1.0 V
- C) 0.00 V
- D) +0.50 V

Q.77. (Chemical Kinetics)

For a first-order reaction, the unit of rate constant is:

- A) mol L⁻¹ s⁻¹
- B) s⁻¹
- C) L mol⁻¹ s⁻¹
- D) mol² L⁻² s⁻¹

Q.78. (Surface Chemistry)

The charge on sol particles in colloidal solution is due to:

- A) Adsorption of ions
- B) High temperature
- C) Brownian motion
- D) Large size

Q.79. (p-Block Elements)

Which gas is known as laughing gas?

- A) NO
- B) NO₂
- C) N₂O
- D) N₂

Q.80. (d-Block Elements)

Which transition metal shows maximum oxidation states?

- A) Chromium
- B) Manganese
- C) Iron
- D) Copper

Q.81. (Coordination Compounds)

The ligand NH₃ is:

- A) Anionic
- B) Neutral
- C) Bidentate
- D) Bridging

Q.82. (Haloarenes)

Chlorobenzene is less reactive towards nucleophilic substitution due to:

- A) Resonance
- B) Inductive effect
- C) Steric hindrance
- D) Hyperconjugation

Q.83. (Alcohols)

Lucas test is used to distinguish between:

- A) Primary, secondary and tertiary alcohols
- B) Aldehydes and ketones
- C) Alcohols and phenols
- D) Amines

Q.84. (Amines)

The basicity of amines in aqueous solution depends on:

- A) Inductive effect
- B) Solvation effect
- C) Resonance
- D) All of the above

Q.85. (Biomolecules)

Which vitamin is water soluble?

- A) Vitamin A
- B) Vitamin D
- C) Vitamin E
- D) Vitamin C

Q.86. (Polymers)

Teflon is chemically known as:

- A) Polyethylene
- B) Polystyrene
- C) Polyvinyl chloride
- D) Polytetrafluoroethylene

Q.87. (Chemistry in Everyday Life)

Antacids are used to neutralize:

- A) Acids in stomach
- B) Bases in stomach
- C) Salts in blood
- D) Enzymes

Q.88. (Environmental Chemistry)

Ozone layer depletion is mainly caused by:

- A) CO₂
- B) SO₂
- C) CFCs
- D) NO

Q.89. (Analytical Chemistry)

pH of pure water at 25°C is:

- A) 5
- B) 6
- C) 7
- D) 8

Q.90. (General Chemistry)

Avogadro number is approximately:

- A) 6.02×10^{22}
- B) 6.02×10^{23}
- C) 3.01×10^{23}
- D) 1.66×10^{-24}

SECTION C: BIOLOGY (90 Questions)

Theme: Statement Verification, Matching & Linkage

SECTION C: BIOLOGY

BOTANY (Q.91–Q.135)

Q.91. (Living World)

Taxonomy is the science of:

- A) Naming organisms
- B) Classification of organisms
- C) Study of living beings
- D) Identification, nomenclature and classification

Q.92. (Biological Classification)

Five-kingdom classification was proposed by:

- A) Linnaeus
- B) Whittaker
- C) Aristotle
- D) Haeckel

Q.93. (Plant Kingdom)

Algae store food mainly in the form of:

- A) Starch
- B) Glycogen
- C) Floridean starch
- D) Oils

Q.94. (Plant Kingdom)

Which of the following is a bryophyte?

- A) Fern
- B) Moss
- C) Pine
- D) Algae

Q.95. (Plant Kingdom)

Vascular tissues are absent in:

- A) Pteridophytes
- B) Bryophytes

- C) Gymnosperms
- D) Angiosperms

Q.96. (Morphology of Flowering Plants)

The edible part of coconut is:

- A) Endosperm
- B) Perisperm
- C) Cotyledon
- D) Embryo

Q.97. (Anatomy of Flowering Plants)

Xylem helps in:

- A) Transport of food
- B) Transport of water
- C) Photosynthesis
- D) Respiration

Q.98. (Cell Structure)

The powerhouse of the cell is:

- A) Ribosome
- B) Mitochondria
- C) Nucleus
- D) Golgi body

Q.99. (Biomolecules)

The basic unit of carbohydrates is:

- A) Amino acid
- B) Fatty acid
- C) Monosaccharide
- D) Nucleotide

Q.100. (Cell Cycle)

DNA replication occurs during:

- A) G1 phase
- B) S phase
- C) G2 phase
- D) M phase

Q.101. (Photosynthesis)

The main pigment involved in photosynthesis is:

- A) Chlorophyll a
- B) Chlorophyll b
- C) Carotene
- D) Xanthophyll

Q.102. (Photosynthesis)

Oxygen released during photosynthesis comes from:

- A) CO₂
- B) Glucose
- C) Water
- D) Chlorophyll

Q.103. (Respiration)

Glycolysis occurs in the:

- A) Mitochondria
- B) Cytoplasm
- C) Nucleus
- D) Chloroplast

Q.104. (Plant Growth)

Auxins promote:

- A) Leaf fall
- B) Cell elongation
- C) Dormancy
- D) Senescence

Q.105. (Transport in Plants)

Opening and closing of stomata is regulated by:

- A) Guard cells
- B) Epidermal cells
- C) Xylem
- D) Phloem

Q.106. (Mineral Nutrition)

Nitrogen deficiency causes:

- A) Yellowing of older leaves

- B) Leaf fall**
- C) Root rot**
- D) Flower drop**

Q.107. (Reproduction in Plants)

Pollination is transfer of pollen grains from:

- A) Anther to stigma**
- B) Ovule to ovary**
- C) Stigma to ovary**
- D) Anther to ovule**

Q.108. (Sexual Reproduction)

Double fertilization occurs in:

- A) Gymnosperms**
- B) Bryophytes**
- C) Angiosperms**
- D) Pteridophytes**

Q.109. (Seeds & Fruits)

Seed coat develops from:

- A) Ovary**
- B) Ovule**
- C) Integuments**
- D) Endosperm**

Q.110. (Genetics)

Father of genetics is:

- A) Darwin**
- B) Mendel**
- C) Morgan**
- D) Lamarck**

Q.111. (Genetics)

The phenotypic ratio in monohybrid cross is:

- A) 1:2:1**
- B) 3:1**
- C) 9:3:3:1**

D) 2:1

Q.112. (Molecular Biology)

DNA is a:

- A) Single-stranded molecule**
- B) Double-stranded molecule**
- C) Protein**
- D) Lipid**

Q.113. (RNA)

Which RNA carries amino acids?

- A) mRNA**
- B) tRNA**
- C) rRNA**
- D) snRNA**

Q.114. (Evolution)

Survival of the fittest was proposed by:

- A) Mendel**
- B) Darwin**
- C) Lamarck**
- D) Wallace**

Q.115. (Ecology)

Study of interaction between organisms and environment is:

- A) Botany**
- B) Zoology**
- C) Ecology**
- D) Physiology**

Q.116. (Ecosystem)

Producers are also called:

- A) Consumers**
- B) Decomposers**
- C) Autotrophs**
- D) Heterotrophs**

Q.117. (Environment)

Major greenhouse gas is:

- A) Oxygen
- B) Nitrogen
- C) Carbon dioxide
- D) Hydrogen

Q.118. (Biodiversity)

India is considered a:

- A) Cold spot
- B) Biodiversity hotspot
- C) Desert region
- D) Polar region

Q.119. (Conservation)

In-situ conservation includes:

- A) Zoo
- B) Botanical garden
- C) Wildlife sanctuary
- D) Seed bank

Q.120. (Biotechnology)

Enzyme used to cut DNA is:

- A) Ligase
- B) Polymerase
- C) Restriction enzyme
- D) Helicase

Q.121. (Biotechnology)

PCR was developed by:

- A) Watson
- B) Crick
- C) Kary Mullis
- D) Mendel

Q.122. (Microbes)

Penicillin is produced by:

- A) Bacteria

- B) Virus**
- C) Algae**
- D) Fungus**

Q.123. (Microbes)

Curd formation is due to:

- A) Yeast**
- B) Lactobacillus**
- C) Rhizobium**
- D) E. coli**

Q.124. (Plant Diseases)

Rust of wheat is caused by:

- A) Virus**
- B) Bacteria**
- C) Fungus**
- D) Algae**

Q.125. (Plant Hormones)

Which hormone causes leaf fall?

- A) Auxin**
- B) Gibberellin**
- C) Cytokinin**
- D) Abscisic acid**

Q.126. (Plant Physiology)

Transpiration occurs mainly through:

- A) Roots**
- B) Stem**
- C) Stomata**
- D) Xylem**

Q.127. (Reproduction)

Male gamete in flowering plants is found in:

- A) Ovule**
- B) Pollen grain**
- C) Ovary**

D) Style

Q.128. (Genetic Code)

Genetic code is:

- A) Overlapping**
- B) Ambiguous**
- C) Universal**
- D) Incomplete**

Q.129. (Mutation)

Sudden change in DNA is called:

- A) Variation**
- B) Evolution**
- C) Mutation**
- D) Adaptation**

Q.130. (Ecology)

Primary consumers are:

- A) Carnivores**
- B) Herbivores**
- C) Decomposers**
- D) Omnivores**

Q.131. (Food Chain)

Energy flow in ecosystem is:

- A) Cyclic**
- B) Bidirectional**
- C) Unidirectional**
- D) Random**

Q.132. (Environment)

Chipko movement is related to:

- A) Water conservation**
- B) Forest conservation**
- C) Wildlife protection**
- D) Pollution control**

Q.133. (Biotechnology)

Golden rice is rich in:

- A) Iron
- B) Protein
- C) Vitamin A
- D) Vitamin C

Q.134. (Microbes)

Which is used as biofertilizer?

- A) Virus
- B) Rhizobium
- C) Algae
- D) Yeast

Q.135. (Plant Growth)

Gibberellins promote:

- A) Seed dormancy
 - B) Stem elongation
 - C) Leaf fall
 - D) Senescence
-

ZOOLOGY (Q.136–Q.180)

Q.136. (Animal Kingdom)

Animals without backbone are called:

- A) Vertebrates
- B) Chordates
- C) Invertebrates
- D) Mammals

Q.137. (Human Physiology)

Functional unit of kidney is:

- A) Neuron
- B) Nephron
- C) Alveolus
- D) Glomerulus

Q.138. (Digestive System)

Protein digestion starts in:

- A) Mouth
- B) Stomach
- C) Small intestine
- D) Large intestine

Q.139. (Respiratory System)

Gas exchange occurs in:

- A) Trachea
- B) Bronchi
- C) Alveoli
- D) Lungs

Q.140. (Circulatory System)

Normal human heart has chambers:

- A) 2
- B) 3
- C) 4
- D) 5

Q.141. (Blood)

Hemoglobin contains:

- A) Calcium
- B) Iron
- C) Sodium
- D) Potassium

Q.142. (Nervous System)

The longest cell in human body is:

- A) Muscle cell
- B) Neuron
- C) RBC
- D) WBC

Q.143. (Endocrine System)

Insulin is secreted by:

- A) Thyroid

- B) Adrenal**
- C) Pancreas**
- D) Pituitary**

Q.144. (Reproduction)

Fertilization in humans occurs in:

- A) Ovary**
- B) Uterus**
- C) Fallopian tube**
- D) Vagina**

Q.145. (Embryology)

Cleavage is:

- A) Growth of embryo**
- B) Division of zygote**
- C) Differentiation**
- D) Organ formation**

Q.146. (Genetics)

Sex determination in humans is based on:

- A) X chromosome**
- B) Y chromosome**
- C) Autosomes**
- D) Mitochondria**

Q.147. (Evolution)

Connecting link between reptiles and birds is:

- A) Lizard**
- B) Archaeopteryx**
- C) Frog**
- D) Snake**

Q.148. (Human Health)

AIDS is caused by:

- A) Bacteria**
- B) Fungus**
- C) Virus**

D) Protozoa

Q.149. (Immunity)

Antibodies are produced by:

- A) RBC
- B) Platelets
- C) WBC
- D) Neurons

Q.150. (Disease)

Malaria is caused by:

- A) Virus
- B) Bacteria
- C) Protozoa
- D) Fungus

Q.151. (Vector)

Vector of malaria is:

- A) Housefly
- B) Aedes
- C) Anopheles
- D) Culex

Q.152. (Vaccination)

Vaccines provide:

- A) Passive immunity
- B) Active immunity
- C) Natural immunity
- D) Genetic immunity

Q.153. (Hormones)

Adrenaline is secreted during:

- A) Rest
- B) Sleep
- C) Stress
- D) Digestion

Q.154. (Muscle)

Voluntary muscles are:

- A) Smooth
- B) Cardiac
- C) Skeletal
- D) Involuntary

Q.155. (Skeleton)

Number of bones in human body is:

- A) 200
- B) 206
- C) 210
- D) 215

Q.156. (Eye)

Vitamin deficiency causing night blindness is:

- A) Vitamin B
- B) Vitamin C
- C) Vitamin D
- D) Vitamin A

Q.157. (Ear)

Organ of hearing is:

- A) Cochlea
- B) Tympanum
- C) Eustachian tube
- D) Pinna

Q.158. (Excretion)

Nitrogenous waste in humans is mainly:

- A) Ammonia
- B) Urea
- C) Uric acid
- D) Creatinine

Q.159. (Reproductive Health)

Permanent method of birth control in males is:

- A) Tubectomy

- B) Vasectomy**
- C) Condom**
- D) Pills**

Q.160. (Population)

Study of population is called:

- A) Ecology**
- B) Ethology**
- C) Demography**
- D) Taxonomy**

Q.161. (Environment)

Ozone protects Earth from:

- A) Infrared rays**
- B) Visible rays**
- C) UV rays**
- D) X-rays**

Q.162. (Conservation)

Endangered species means:

- A) Extinct species**
- B) Species at risk of extinction**
- C) Common species**
- D) Domestic species**

Q.163. (Animal Behavior)

Study of animal behavior is called:

- A) Ecology**
- B) Ethology**
- C) Zoology**
- D) Physiology**

Q.164. (Evolution)

Homologous organs indicate:

- A) Analogous origin**
- B) Common ancestry**
- C) Different function**

D) No relation

Q.165. (Fossils)

Fossils are found in:

- A) Igneous rocks**
- B) Metamorphic rocks**
- C) Sedimentary rocks**
- D) Volcanic rocks**

Q.166. (Biotechnology)

Insulin produced by recombinant DNA is called:

- A) Animal insulin**
- B) Synthetic insulin**
- C) Human insulin**
- D) Artificial insulin**

Q.167. (Cloning)

First cloned animal was:

- A) Sheep Dolly**
- B) Dog**
- C) Cat**
- D) Cow**

Q.168. (Microbes)

Yeast is used in production of:

- A) Antibiotics**
- B) Alcohol**
- C) Vaccine**
- D) Insulin**

Q.169. (Human Health)

Balanced diet means:

- A) Only carbohydrates**
- B) Only proteins**
- C) All nutrients in proper proportion**
- D) Only vitamins**

Q.170. (Hormones)

Growth hormone is secreted by:

- A) Thyroid
- B) Adrenal
- C) Pituitary
- D) Pancreas

Q.171. (Reflex Action)

Reflex actions are controlled by:

- A) Brain
- B) Spinal cord
- C) Cerebellum
- D) Medulla

Q.172. (Blood Group)

Universal donor blood group is:

- A) A
- B) B
- C) AB
- D) O

Q.173. (Blood Group)

Universal recipient blood group is:

- A) A
- B) B
- C) AB
- D) O

Q.174. (Respiration)

ATP is produced in:

- A) Nucleus
- B) Ribosome
- C) Mitochondria
- D) Lysosome

Q.175. (Muscle Fatigue)

Lactic acid accumulates due to:

- A) Aerobic respiration

- B) Anaerobic respiration**
- C) Photosynthesis**
- D) Digestion**

Q.176. (Human Brain)

Center for balance is:

- A) Cerebrum**
- B) Cerebellum**
- C) Medulla**
- D) Pons**

Q.177. (Disease)

Cholera is caused by:

- A) Virus**
- B) Bacteria**
- C) Fungus**
- D) Protozoa**

Q.178. (Vector Disease)

Dengue is spread by:

- A) Anopheles**
- B) Culex**
- C) Aedes**
- D) Housefly**

Q.179. (Immunity)

BCG vaccine is for:

- A) Polio**
- B) Tuberculosis**
- C) Typhoid**
- D) Hepatitis**

Q.180. (Environment)

Most abundant gas in atmosphere is:

- A) Oxygen**
- B) Carbon dioxide**
- C) Nitrogen**
- D) Argon**

 **ANSWER KEY**

PHYSICS (Q.1–Q.45)

1. B

2. A

3. C

4. D

5. B

6. A

7. C

8. B

9. D

10. A

11. C

12. B

13. A

14. C

15. C

16. A

17. B

18. B

19. A

20. B

21. A

22. A

23. D

24. A

25. B

26. B

27. B

28. B

29. B

30. A

31. A

32. B

33. B

34. B

35. B

36. C

37. C

38. B

39. C

40. C

41. C

42. B

43. B

44. C

45. C

CHEMISTRY (Q.46–Q.90)

46. B

47. B

48. C

49. A

50. B

51. B

52. C

53. A

54. B

55. A

56. C

57. B

58. D

59. B

60. B

61. B

62. B

63. C

64. B

65. C

66. D

67. A

68. C

69. B

70. B

71. C

72. B

73. B

74. B

75. A

76. C

77. B

78. A

79. C

80. B

81. B

82. A

83. A

84. D

85. D

86. D

87. A

88. C

89. C

90. B

BIOLOGY (Q.91–Q.180)

91. D

92. B

93. A

94. B

95. B

96. A

97. B

98. B

99. C

100. B

101. A

102. C

103. B

104. B

105. A

- 106.** A
- 107.** A
- 108.** C
- 109.** C
- 110.** B
- 111.** B
- 112.** B
- 113.** B
- 114.** B
- 115.** C
- 116.** C
- 117.** C
- 118.** B
- 119.** C
- 120.** C
- 121.** C
- 122.** D
- 123.** B
- 124.** C
- 125.** D
- 126.** C
- 127.** B
- 128.** C
- 129.** C
- 130.** B
- 131.** C
- 132.** B
- 133.** C

- 134.** B
- 135.** B
- 136.** C
- 137.** B
- 138.** B
- 139.** C
- 140.** C
- 141.** B
- 142.** B
- 143.** C
- 144.** C
- 145.** B
- 146.** B
- 147.** B
- 148.** C
- 149.** C
- 150.** C
- 151.** C
- 152.** B
- 153.** C
- 154.** C
- 155.** B
- 156.** D
- 157.** A
- 158.** B
- 159.** B
- 160.** C
- 161.** C

- 162.** B
- 163.** B
- 164.** B
- 165.** C
- 166.** C
- 167.** A
- 168.** B
- 169.** C
- 170.** C
- 171.** B
- 172.** D
- 173.** C
- 174.** C
- 175.** B
- 176.** B
- 177.** B
- 178.** C
- 179.** B
- 180.** C