

NEET UG

Sample Question Paper - 2023

Country: IN | Duration: 3h 20m | Max Marks: 720 | Language: English

Negative Marking: Yes (-1) | Total Questions: 150 | QuizVerse AI Tutor

General Instructions:

1. This paper contains 150 questions across 3 section(s): Physics, Chemistry, Biology.
2. Duration: 3h 20m. Maximum marks: 720.
3. Negative marking: Yes (-1).
4. Read each question carefully before answering.

Section 1: Physics (50 Questions)

Q1. The electric field at 2 m from a point charge of 2 μC is:

- (A) 1325 N/C
- (B) 1798 N/C
- (C) 5661 N/C
- (D) 8217 N/C

Q2. A spring with $k = 494 \text{ N/m}$ is compressed by 0.17 m. The stored PE is:

- (A) 20.63 J
- (B) 18.25 J
- (C) 22.76 J
- (D) 16.40 J

Q3. The escape velocity from a planet of mass $8 \times 10^{24} \text{ kg}$ and radius 7545 km is:

- (A) 14.3 km/s
- (B) 13.0 km/s
- (C) 10.2 km/s
- (D) 13.2 km/s

Q4. The electric field at 1 m from a point charge of 10 μC is:

- (A) 5784 N/C
- (B) 2935 N/C
- (C) 4338 N/C
- (D) 6300 N/C

Q5. Light passes from glass ($n=1.6$) to air. The critical angle is:

- (A) 43 degrees
- (B) 38 degrees
- (C) 43 degrees
- (D) 39 degrees

Q6. The de Broglie wavelength of an electron accelerated through 50 V is approximately:

- (A) 2.55 Angstrom
- (B) 1.32 Angstrom
- (C) 1.17 Angstrom
- (D) 1.07 Angstrom

Q7. The escape velocity from a planet of mass 8×10^{24} kg and radius 6600 km is:

- (A) 14.9 km/s
- (B) 14.3 km/s
- (C) 9.9 km/s
- (D) 10.1 km/s

Q8. The electric field at 3 m from a point charge of 6 μ C is:

- (A) 8811 N/C
- (B) 7047 N/C
- (C) 1784 N/C
- (D) 672 N/C

Q9. The escape velocity from a planet of mass 4×10^{24} kg and radius 7718 km is:

- (A) 9.0 km/s
- (B) 13.2 km/s
- (C) 14.0 km/s
- (D) 8.9 km/s

Q10. A radioactive substance has half-life 30 days. The fraction remaining after 33 days is:

- (A) $1/4$
- (B) $1/16$
- (C) $1/8$
- (D) $1/16$

Q11. A Carnot engine operates between 461 K and 327 K. Its efficiency is:

- (A) 46%
- (B) 35%
- (C) 63%
- (D) 69%

Q12. Two masses 7 kg and 11 kg are connected by a string over a frictionless pulley. The acceleration of the system is:

- (A) 5.61 m/s^2
- (B) 3.15 m/s^2
- (C) 2.57 m/s^2
- (D) 3.18 m/s^2

Q13. A Carnot engine operates between 765 K and 266 K. Its efficiency is:

- (A) 52%
- (B) 25%
- (C) 35%
- (D) 56%

Q14. The current through a 26 ohm resistor connected to a 7 V battery is:

- (A) 3.78 A
- (B) 4.61 A
- (C) 4.78 A
- (D) 2.28 A

Q15. A convex lens of focal length 18 cm forms a real image of an object placed 46 cm away. The image distance is:

- (A) 19 cm
- (B) 25 cm
- (C) 35 cm
- (D) 34 cm

Q16. A wire of resistance 6 ohm is bent into a circle. Effective resistance between diametrically opposite points is:

- (A) 5 ohm
- (B) 8 ohm
- (C) 10 ohm
- (D) 2 ohm

Q17. An ideal gas at 295 K is heated at constant pressure to 678 K. The ratio of final to initial volume is:

- (A) 1.5
- (B) 1.5
- (C) 2.4
- (D) 2.3

Q18. In photoelectric effect, the stopping potential for light of wavelength 546 nm on a metal with work function 2.8 eV is:

- (A) 1.46 V
- (B) 1.06 V
- (C) 0.91 V
- (D) 3.66 V

Q19. The de Broglie wavelength of an electron accelerated through 50 V is approximately:

- (A) 2.14 Angstrom
- (B) 2.64 Angstrom
- (C) 1.53 Angstrom
- (D) 1.20 Angstrom

Q20. Two capacitors 10 uF and 6 uF are connected in series. The equivalent capacitance is:

- (A) 3.31 uF
- (B) 2.11 uF
- (C) 4.84 uF
- (D) 2.91 uF

Q21. The current through a 26 ohm resistor connected to a 15 V battery is:

- (A) 2.36 A
- (B) 2.83 A
- (C) 0.50 A
- (D) 1.89 A

Q22. A force of 38 N acts on a 19 kg body initially at rest. The velocity after 3 s is:

- (A) 14 m/s
- (B) 13 m/s
- (C) 8 m/s
- (D) 48 m/s

Q23. The current through a 15 ohm resistor connected to a 21 V battery is:

- (A) 0.53 A
- (B) 3.75 A
- (C) 3.95 A
- (D) 2.87 A

Q24. The binding energy per nucleon of Fe-56 is approximately:

- (A) 8.8 MeV
- (B) 6.5 MeV
- (C) 7.6 MeV
- (D) 9.2 MeV

Q25. A force of 11 N acts on a 20 kg body initially at rest. The velocity after 5 s is:

- (A) 28 m/s
- (B) 47 m/s
- (C) 38 m/s
- (D) 35 m/s

Q26. A force of 64 N acts on a 17 kg body initially at rest. The velocity after 4 s is:

- (A) 49 m/s
- (B) 37 m/s
- (C) 26 m/s
- (D) 7 m/s

Q27. A convex lens of focal length 16 cm forms a real image of an object placed 22 cm away. The image distance is:

- (A) 25 cm
- (B) 51 cm
- (C) 15 cm
- (D) 45 cm

Q28. The work function of a metal is 2.0 eV. The threshold frequency is:

- (A) 11.94×10^{14} Hz
- (B) 3.06×10^{14} Hz
- (C) 6.47×10^{14} Hz
- (D) 8.20×10^{14} Hz

Q29. A ball is dropped from height 90 m. Its velocity just before hitting the ground is:

- (A) 32.6 m/s
- (B) 35.0 m/s
- (C) 28.3 m/s
- (D) 35.8 m/s

Q30. A Carnot engine operates between 765 K and 254 K. Its efficiency is:

- (A) 65%
- (B) 30%
- (C) 52%
- (D) 58%

Q31. A body of mass 3 kg is moving in a circle of radius 4 m at 18 m/s. The centripetal force is:

- (A) 30 N
- (B) 165 N
- (C) 186 N
- (D) 28 N

Q32. A projectile is launched at 45 degrees with initial velocity 36 m/s. The time of flight is approximately:

- (A) 1.6 s
- (B) 2.5 s
- (C) 2.4 s
- (D) 4.3 s

Q33. Two masses 8 kg and 7 kg are connected by a string over a frictionless pulley. The acceleration of the system is:

- (A) 2.54 m/s²
- (B) 1.16 m/s²
- (C) 1.73 m/s²
- (D) 4.13 m/s²

Q34. Two capacitors 9 uF and 9 uF are connected in series. The equivalent capacitance is:

- (A) 4.38 uF
- (B) 3.34 uF
- (C) 4.96 uF
- (D) 1.37 uF

Q35. The focal length of a concave mirror is 21 cm. An object at 25 cm forms image at:

- (A) 47 cm, real inverted
- (B) 15 cm, real inverted
- (C) 53 cm, real inverted
- (D) 34 cm, real inverted

Q36. The binding energy per nucleon of Fe-56 is approximately:

- (A) 6.5 MeV
- (B) 7.6 MeV
- (C) 8.8 MeV
- (D) 9.2 MeV

Q37. A spring with $k = 390$ N/m is compressed by 0.17 m. The stored PE is:

- (A) 6.04 J
- (B) 3.86 J
- (C) 23.88 J
- (D) 8.03 J

Q38. Light passes from glass ($n=1.7$) to air. The critical angle is:

- (A) 50 degrees
- (B) 36 degrees
- (C) 37 degrees
- (D) 44 degrees

Q39. The binding energy per nucleon of Fe-56 is approximately:

- (A) 7.6 MeV
- (B) 6.5 MeV
- (C) 9.2 MeV
- (D) 8.8 MeV

Q40. A solenoid of 268 turns and length 0.2 m carries current 10 A. The magnetic field inside is:

- (A) 17.10 mT
- (B) 2.75 mT
- (C) 13.54 mT
- (D) 15.17 mT

Q41. An ideal gas at 304 K is heated at constant pressure to 757 K. The ratio of final to initial volume is:

- (A) 2.0
- (B) 1.6
- (C) 2.7
- (D) 2.3

Q42. Two masses 7 kg and 12 kg are connected by a string over a frictionless pulley. The acceleration of the system is:

- (A) 3.30 m/s^2
- (B) 1.05 m/s^2
- (C) 2.75 m/s^2
- (D) 4.57 m/s^2

Q43. A Carnot engine operates between 781 K and 324 K. Its efficiency is:

- (A) 54%
- (B) 28%
- (C) 51%
- (D) 60%

Q44. The focal length of a concave mirror is 17 cm. An object at 30 cm forms image at:

- (A) 17 cm, real inverted
- (B) 43 cm, real inverted
- (C) 23 cm, real inverted
- (D) 32 cm, real inverted

Q45. The binding energy per nucleon of Fe-56 is approximately:

- (A) 8.8 MeV
- (B) 7.6 MeV
- (C) 6.5 MeV
- (D) 9.2 MeV

Q46. A convex lens of focal length 21 cm forms a real image of an object placed 23 cm away. The image distance is:

- (A) 38 cm
- (B) 35 cm
- (C) 55 cm
- (D) 18 cm

Q47. In photoelectric effect, the stopping potential for light of wavelength 324 nm on a metal with work function 3.1 eV is:

- (A) 3.23 V
- (B) 2.36 V
- (C) 0.94 V
- (D) 2.24 V

Q48. A projectile is launched at 45 degrees with initial velocity 22 m/s. The time of flight is approximately:

- (A) 3.3 s
- (B) 3.9 s
- (C) 2.9 s
- (D) 4.6 s

Q49. A car of mass 1593 kg moving at 44 m/s brakes to rest in 9 s. The braking force is:

- (A) 4174 N
- (B) 3916 N
- (C) 15289 N
- (D) 16867 N

Q50. The work function of a metal is 1.9 eV. The threshold frequency is:

- (A) 4.83×10^{14} Hz
- (B) 10.27×10^{14} Hz
- (C) 3.03×10^{14} Hz
- (D) 8.51×10^{14} Hz

Section 2: Chemistry (50 Questions)

Q51. The entropy change for an irreversible process is:

- (A) Greater than q_{rev}/T
- (B) Zero
- (C) Equal to q/T
- (D) Negative always

Q52. The van't Hoff factor for NaCl is approximately:

- (A) 2
- (B) 1
- (C) 3
- (D) 0.5

Q53. The magnetic moment of Fe²⁺ (d⁶) in weak field is:

- (A) 4.9 BM (4 unpaired)
- (B) 5.9 BM
- (C) 0 BM
- (D) 2.83 BM

Q54. The osmotic pressure of a solution is given by:

- (A) $\pi = mRT$
- (B) $\pi = PV$
- (C) $\pi = iMRT$
- (D) $\pi = nRT/V$

Q55. For a first-order reaction with $k = 0.080 \text{ s}^{-1}$, the half-life is:

- (A) 20.0 s
- (B) 15.0 s
- (C) 10.0 s
- (D) 13.9 s

Q56. The osmotic pressure of a solution is given by:

- (A) $\pi = mRT$
- (B) $\pi = nRT/V$
- (C) $\pi = PV$
- (D) $\pi = iMRT$

Q57. The major product of SN₁ reaction of tert-butyl chloride with ethanol is:

- (A) tert-Butanol
- (B) tert-Butyl ethyl ether
- (C) Isobutane
- (D) 2-Methylpropene

Q58. Perkin reaction produces:

- (A) Amines
- (B) Alpha,beta-unsaturated acids
- (C) Alcohols
- (D) Ethers

Q59. Friedel-Crafts acylation uses which catalyst?

- (A) FeCl₃
- (B) AlCl₃
- (C) CuCl₂
- (D) ZnCl₂

Q60. The pH of a 0.1 M HCl solution is:

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

Q61. The entropy change for an irreversible process is:

- (A) Greater than q_{rev}/T
- (B) Zero
- (C) Negative always
- (D) Equal to q/T

Q62. The crystal field splitting energy in octahedral complex is:

- (A) $10Dq_{\text{tet}}$
- (B) Δ_{oct}
- (C) Δ_{tet}
- (D) Δ_{sq}

Q63. Grignard reagents react with dry CO_2 to give:

- (A) Esters
- (B) Alcohols
- (C) Ketones
- (D) Carboxylic acids

Q64. Which of the following has the highest lattice energy?

- (A) NaCl
- (B) NaI
- (C) NaBr
- (D) NaF

Q65. Hess's law states that:

- (A) Volume is constant
- (B) Enthalpy change is path independent
- (C) Rate depends on concentration
- (D) Entropy always increases

Q66. The order of ionic radius: Na^+ vs Mg^{2+} vs Al^{3+} is:

- (A) $\text{Al}^{3+} > \text{Mg}^{2+} > \text{Na}^+$
- (B) $\text{Na}^+ > \text{Mg}^{2+} > \text{Al}^{3+}$
- (C) All equal
- (D) $\text{Mg}^{2+} > \text{Na}^+ > \text{Al}^{3+}$

Q67. Wurtz reaction involves coupling of:

- (A) Aldehydes with NaOH
- (B) Aryl halides with Cu
- (C) Alkyl halides with Na
- (D) Acids with SOCl_2

Q68. The lightest noble gas is:

- (A) Helium
- (B) Argon
- (C) Neon
- (D) Krypton

Q69. Which reagent is used for Baeyer-Villiger oxidation?

- (A) LiAlH_4
- (B) NaBH_4
- (C) KMnO_4
- (D) mCPBA / peracid

Q70. The pH of a 0.1 M HCl solution is:

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

Q71. Lanthanide contraction is caused by:

- (A) Electron capture
- (B) Poor shielding by 4f electrons
- (C) Nuclear fusion
- (D) High ionization energy

Q72. The IUPAC name of neopentane is:

- (A) Cyclopentane
- (B) 2-Methylbutane
- (C) 2,2-Dimethylpropane
- (D) Pentane

Q73. Colligative properties depend on:

- (A) Molar mass of solute
- (B) Nature of solvent
- (C) Nature of solute
- (D) Number of solute particles

Q74. For an ideal gas, $C_p - C_v$ equals:

- (A) 0
- (B) R (8.314 J/mol K)
- (C) $R/2$
- (D) $2R$

Q75. The colour of KMnO_4 is due to:

- (A) d-d transition
- (B) s-p transition
- (C) f-f transition
- (D) Charge transfer transition

Q76. The hybridization of Ni in $[\text{Ni}(\text{CN})_4]^{2-}$ is:

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

Q77. Which element has the highest electronegativity?

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

Q78. The coordination number in BCC is:

- (A) 8
- (B) 4
- (C) 12
- (D) 6

Q79. VSEPR theory predicts the shape of SF₆ as:

- (A) Square planar
- (B) Octahedral
- (C) Trigonal bipyramidal
- (D) Tetrahedral

Q80. d-block elements show variable oxidation states because:

- (A) Low ionization energy
- (B) Large atomic size
- (C) Close energy of (n-1)d and ns orbitals
- (D) Filled d orbitals

Q81. For an endothermic reaction, increasing temperature:

- (A) No effect
- (B) Decreases equilibrium constant
- (C) Increases equilibrium constant
- (D) Decreases rate

Q82. The crystal field splitting energy in octahedral complex is:

- (A) Δ_{oct}
- (B) $10Dq_{tet}$
- (C) Δ_{sq}
- (D) Δ_{tet}

Q83. According to Raoult's law, the vapour pressure of a solvent in solution is:

- (A) $p = p_0 \cdot x_{solvent}$
- (B) $p = p_0 \cdot x_{solute}$
- (C) $p = RT/V$
- (D) $p = p_0 / x_{solvent}$

Q84. Kolbe's electrolysis of sodium acetate gives:

- (A) Butane
- (B) Propane
- (C) Methane
- (D) Ethane

Q85. Which element has the highest electronegativity?

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

Q86. Markovnikov's rule applies to the addition of HBr to:

- (A) Propene
- (B) Ethene
- (C) Benzene
- (D) Methane

Q87. The cell potential for $Zn|Zn^{2+}||Cu^{2+}|Cu$ cell is:

- (A) 0.34 V
- (B) -0.76 V
- (C) 0.76 V
- (D) 1.10 V

Q88. Wurtz reaction involves coupling of:

- (A) Aryl halides with Cu
- (B) Aldehydes with NaOH
- (C) Alkyl halides with Na
- (D) Acids with $SOCl_2$

Q89. The ore of aluminium is:

- (A) Galena
- (B) Haematite
- (C) Bauxite
- (D) Chalcopyrite

Q90. Which of the following has the highest lattice energy?

- (A) NaF
- (B) NaCl
- (C) NaBr
- (D) NaI

Q91. The IUPAC name of $CH_3CH(OH)CH_3$ is:

- (A) Isopropyl ether
- (B) 2-Methylethanol
- (C) Propan-2-ol
- (D) Propan-1-ol

Q92. Williamson's synthesis is used to prepare:

- (A) Ethers
- (B) Alcohols
- (C) Esters
- (D) Amines

Q93. The ore of aluminium is:

- (A) Bauxite
- (B) Galena
- (C) Chalcopyrite
- (D) Haematite

Q94. Markovnikov's rule applies to the addition of HBr to:

- (A) Methane
- (B) Benzene
- (C) Ethene
- (D) Propene

Q95. The product of dehydration of ethanol at 443 K is:

- (A) Acetaldehyde
- (B) Acetic acid
- (C) Diethyl ether
- (D) Ethylene (C₂H₄)

Q96. The equilibrium constant K_p and K_c are related by:

- (A) $K_p = RT \cdot K_c$
- (B) $K_p = K_c(RT)^{\Delta n}$
- (C) $K_p = K_c$
- (D) $K_p = K_c/RT$

Q97. The reagent for converting aldehyde to carboxylic acid is:

- (A) NaBH₄
- (B) Zn-Hg / HCl
- (C) LiAlH₄
- (D) KMnO₄ / K₂Cr₂O₇

Q98. The major product of SN₁ reaction of tert-butyl chloride with ethanol is:

- (A) Isobutane
- (B) tert-Butanol
- (C) tert-Butyl ethyl ether
- (D) 2-Methylpropene

Q99. The van't Hoff factor for NaCl is approximately:

- (A) 0.5
- (B) 2
- (C) 1
- (D) 3

Q100. The product of dehydration of ethanol at 443 K is:

- (A) Diethyl ether
- (B) Ethylene (C₂H₄)
- (C) Acetaldehyde
- (D) Acetic acid

Section 3: Biology (50 Questions)

Q101. Blood group O is the universal:

- (A) Neither
- (B) Donor
- (C) Both
- (D) Recipient

Q102. The lock-and-key model explains:

- (A) Enzyme specificity
- (B) DNA replication
- (C) Cell division
- (D) Protein folding

Q103. Xylem transports:

- (A) Amino acids
- (B) Water and minerals
- (C) Hormones
- (D) Sugars

Q104. Primary succession occurs on:

- (A) Clear-cut area
- (B) Burned forest
- (C) Bare rock
- (D) Abandoned farmland

Q105. Primary succession occurs on:

- (A) Abandoned farmland
- (B) Clear-cut area
- (C) Burned forest
- (D) Bare rock

Q106. The lock-and-key model explains:

- (A) Cell division
- (B) DNA replication
- (C) Enzyme specificity
- (D) Protein folding

Q107. Biogeochemical cycling of nitrogen includes:

- (A) Glycolysis
- (B) Nitrification
- (C) Krebs cycle
- (D) Photolysis

Q108. Ecological pyramid of energy is always:

- (A) Upright
- (B) Spindle-shaped
- (C) Inverted
- (D) Both possible

Q109. Insulin promotes:

- (A) Glycogenesis
- (B) Glycogenolysis
- (C) Lipolysis
- (D) Gluconeogenesis

Q110. The nitrogenous base not found in RNA is:

- (A) Uracil
- (B) Thymine
- (C) Guanine
- (D) Adenine

Q111. Antibodies are produced by:

- (A) Macrophages
- (B) T lymphocytes
- (C) B lymphocytes
- (D) Neutrophils

Q112. Mitosis results in:

- (A) 4 haploid cells
- (B) 3 cells
- (C) 2 identical daughter cells
- (D) 1 large cell

Q113. DNA replication is:

- (A) Conservative
- (B) Random
- (C) Dispersive
- (D) Semi-conservative

Q114. Which enzyme unwinds DNA during replication?

- (A) Ligase
- (B) DNA polymerase
- (C) Helicase
- (D) Primase

Q115. The Krebs cycle occurs in:

- (A) Cytoplasm
- (B) Nucleus
- (C) Mitochondrial matrix
- (D) ER

Q116. Which enzyme unwinds DNA during replication?

- (A) Ligase
- (B) Helicase
- (C) DNA polymerase
- (D) Primase

Q117. Which organelle is involved in lipid synthesis?

- (A) Lysosome
- (B) Rough ER
- (C) Golgi
- (D) Smooth ER

Q118. The functional unit of kidney is:

- (A) Nephron
- (B) Alveolus
- (C) Villus
- (D) Neuron

Q119. Ozone layer is found in:

- (A) Thermosphere
- (B) Stratosphere
- (C) Mesosphere
- (D) Troposphere

Q120. Blood is a type of:

- (A) Epithelial tissue
- (B) Connective tissue
- (C) Muscle tissue
- (D) Nervous tissue

Q121. Which is the site of transcription in eukaryotes?

- (A) Ribosome
- (B) ER
- (C) Cytoplasm
- (D) Nucleus

Q122. Hardy-Weinberg equilibrium assumes:

- (A) Selection pressure
- (B) High mutation rate
- (C) No mutation
- (D) Small population

Q123. Photosystem II is located in:

- (A) Inner membrane
- (B) Stroma
- (C) Cytoplasm
- (D) Thylakoid membrane

Q124. Calvin cycle occurs in:

- (A) Cytoplasm
- (B) Thylakoid
- (C) Nucleus
- (D) Stroma

Q125. The pacemaker of the heart is:

- (A) Purkinje fibers
- (B) Bundle of His
- (C) AV node
- (D) SA node

Q126. Which is the site of transcription in eukaryotes?

- (A) Ribosome
- (B) Nucleus
- (C) Cytoplasm
- (D) ER

Q127. Biodiversity hotspots have:

- (A) Cold climate
- (B) No endemic species
- (C) High endemism and threat
- (D) Low species count

Q128. Photosystem II is located in:

- (A) Inner membrane
- (B) Cytoplasm
- (C) Stroma
- (D) Thylakoid membrane

Q129. PCR is used to:

- (A) Sequence proteins
- (B) Culture cells
- (C) Stain tissues
- (D) Amplify DNA

Q130. Stomata open when guard cells:

- (A) Divide
- (B) Lose water
- (C) Die
- (D) Become turgid

Q131. Ozone layer is found in:

- (A) Mesosphere
- (B) Troposphere
- (C) Stratosphere
- (D) Thermosphere

Q132. The study of fossils is called:

- (A) Histology
- (B) Taxonomy
- (C) Ecology
- (D) Paleontology

Q133. The number of chromosomes in human gametes is:

- (A) 23
- (B) 44
- (C) 46
- (D) 22

Q134. The largest organ in the human body is:

- (A) Skin
- (B) Lungs
- (C) Liver
- (D) Brain

Q135. The anticodon is found on:

- (A) mRNA
- (B) rRNA
- (C) tRNA
- (D) DNA

Q136. Which hormone triggers ovulation?

- (A) FSH
- (B) LH
- (C) Progesterone
- (D) Estrogen

Q137. The nitrogenous base not found in RNA is:

- (A) Adenine
- (B) Uracil
- (C) Thymine
- (D) Guanine

Q138. Which vitamin deficiency causes scurvy?

- (A) Vitamin C
- (B) Vitamin K
- (C) Vitamin A
- (D) Vitamin D

Q139. The pacemaker of the heart is:

- (A) AV node
- (B) Purkinje fibers
- (C) SA node
- (D) Bundle of His

Q140. Crossing over occurs during:

- (A) Metaphase I
- (B) Pachytene
- (C) Telophase I
- (D) Anaphase II

Q141. The Krebs cycle occurs in:

- (A) ER
- (B) Nucleus
- (C) Cytoplasm
- (D) Mitochondrial matrix

Q142. The oxygen-carrying pigment in blood is:

- (A) Hemoglobin
- (B) Myoglobin
- (C) Chlorophyll
- (D) Cytochrome

Q143. Which is a vestigial organ in humans?

- (A) Kidney
- (B) Appendix
- (C) Heart
- (D) Liver

Q144. The anticodon is found on:

- (A) tRNA
- (B) mRNA
- (C) DNA
- (D) rRNA

Q145. Chlorophyll absorbs mostly:

- (A) UV light
- (B) Green light
- (C) Red and blue light
- (D) Infrared light

Q146. Sickle cell anemia is caused by:

- (A) Insertion
- (B) Point mutation in hemoglobin gene
- (C) Deletion
- (D) Translocation

Q147. Calvin cycle occurs in:

- (A) Thylakoid
- (B) Nucleus
- (C) Stroma
- (D) Cytoplasm

Q148. Blood group O is the universal:

- (A) Recipient
- (B) Both
- (C) Donor
- (D) Neither

Q149. Dihybrid cross ratio is:

- (A) 3:1
- (B) 9:3:3:1
- (C) 1:1
- (D) 1:2:1

Q150. DNA replication is:

- (A) Dispersive
- (B) Semi-conservative
- (C) Conservative
- (D) Random

Answer Key

Q1: (B)	Q2: (D)	Q3: (D)	Q4: (B)	Q5: (B)
Q6: (D)	Q7: (D)	Q8: (D)	Q9: (B)	Q10: (A)
Q11: (D)	Q12: (D)	Q13: (B)	Q14: (D)	Q15: (B)
Q16: (A)	Q17: (A)	Q18: (C)	Q19: (C)	Q20: (B)
Q21: (A)	Q22: (A)	Q23: (C)	Q24: (A)	Q25: (D)
Q26: (C)	Q27: (C)	Q28: (A)	Q29: (B)	Q30: (C)
Q31: (C)	Q32: (C)	Q33: (C)	Q34: (A)	Q35: (A)
Q36: (C)	Q37: (C)	Q38: (C)	Q39: (D)	Q40: (B)
Q41: (C)	Q42: (B)	Q43: (B)	Q44: (B)	Q45: (A)
Q46: (D)	Q47: (D)	Q48: (D)	Q49: (A)	Q50: (A)
Q51: (A)	Q52: (A)	Q53: (A)	Q54: (C)	Q55: (D)
Q56: (D)	Q57: (B)	Q58: (B)	Q59: (B)	Q60: (C)
Q61: (A)	Q62: (B)	Q63: (D)	Q64: (D)	Q65: (B)
Q66: (B)	Q67: (C)	Q68: (A)	Q69: (D)	Q70: (A)
Q71: (B)	Q72: (C)	Q73: (D)	Q74: (B)	Q75: (D)
Q76: (D)	Q77: (A)	Q78: (A)	Q79: (B)	Q80: (C)
Q81: (C)	Q82: (A)	Q83: (A)	Q84: (D)	Q85: (C)
Q86: (A)	Q87: (D)	Q88: (C)	Q89: (C)	Q90: (A)
Q91: (C)	Q92: (A)	Q93: (A)	Q94: (D)	Q95: (D)
Q96: (B)	Q97: (D)	Q98: (C)	Q99: (B)	Q100: (B)
Q101: (B)	Q102: (A)	Q103: (B)	Q104: (C)	Q105: (D)
Q106: (C)	Q107: (B)	Q108: (A)	Q109: (A)	Q110: (B)
Q111: (C)	Q112: (C)	Q113: (D)	Q114: (C)	Q115: (C)
Q116: (B)	Q117: (D)	Q118: (A)	Q119: (B)	Q120: (B)
Q121: (D)	Q122: (C)	Q123: (D)	Q124: (D)	Q125: (D)
Q126: (B)	Q127: (C)	Q128: (D)	Q129: (D)	Q130: (D)
Q131: (C)	Q132: (D)	Q133: (A)	Q134: (A)	Q135: (C)
Q136: (B)	Q137: (C)	Q138: (A)	Q139: (C)	Q140: (B)
Q141: (D)	Q142: (A)	Q143: (B)	Q144: (A)	Q145: (C)
Q146: (B)	Q147: (C)	Q148: (C)	Q149: (B)	Q150: (B)