# NEET UG

Sample Question Paper - 2024

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

(A) 2.11 uF

(B) 3.31 uF

(C) 2.91 uF

(D) 4.84 uF

**Q2. A force of 11 N acts on a 20 kg body initially at rest. The velocity after 5 s is:**

(A) 47 m/s

(B) 28 m/s

(C) 35 m/s

(D) 38 m/s

**Q3. A force of 64 N acts on a 17 kg body initially at rest. The velocity after 4 s is:**

(A) 37 m/s

(B) 7 m/s

(C) 49 m/s

(D) 26 m/s

**Q4. 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

**Q5. The electric field at 1 m from a point charge of 10 uC is:**

(A) 5784 N/C

(B) 4338 N/C

(C) 6300 N/C

(D) 2935 N/C

**Q6. A wire of resistance 11 ohm is bent into a circle. Effective resistance between diametrically opposite points is:**

(A) 2 ohm

(B) 4 ohm

(C) 7 ohm

(D) 3 ohm

**Q7. A car of mass 1565 kg moving at 25 m/s brakes to rest in 7 s. The braking force is:**

(A) 15156 N

(B) 6477 N

(C) 17916 N

(D) 6209 N

**Q8. A solenoid of 609 turns and length 0.5 m carries current 6 A. The magnetic field inside is:**

(A) 5.04 mT

(B) 2.76 mT

(C) 4.52 mT

(D) 1.36 mT

**Q9. Two capacitors 4 uF and 2 uF are connected in series. The equivalent capacitance is:**

(A) 1.09 uF

(B) 1.73 uF

(C) 2.80 uF

(D) 2.79 uF

**Q10. 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) 2.75 m/s^2

(C) 4.57 m/s^2

(D) 1.05 m/s^2

**Q11. The work function of a metal is 3.3 eV. The threshold frequency is:**

(A) 7.25 x 10^14 Hz

(B) 10.83 x 10^14 Hz

(C) 6.65 x 10^14 Hz

(D) 9.88 x 10^14 Hz

**Q12. Two capacitors 9 uF and 9 uF are connected in series. The equivalent capacitance is:**

(A) 3.34 uF

(B) 1.37 uF

(C) 4.96 uF

(D) 4.38 uF

**Q13. An electron moves with velocity 1x10^6 m/s perpendicular to a magnetic field of 0.2 T. The radius of its path is:**

(A) 1.26 cm

(B) 1.43 cm

(C) 1.26 cm

(D) 3.91 cm

**Q14. In photoelectric effect, the stopping potential for light of wavelength 285 nm on a metal with work function 3.6 eV is:**

(A) 3.40 V

(B) 3.94 V

(C) 3.88 V

(D) 2.26 V

**Q15. An electron moves with velocity 1x10^6 m/s perpendicular to a magnetic field of 0.3 T. The radius of its path is:**

(A) 1.71 cm

(B) 0.95 cm

(C) 0.80 cm

(D) 2.09 cm

**Q16. A car of mass 1229 kg moving at 56 m/s brakes to rest in 7 s. The braking force is:**

(A) 14865 N

(B) 5716 N

(C) 11583 N

(D) 10834 N

**Q17. A wire of resistance 6 ohm is bent into a circle. Effective resistance between diametrically opposite points is:**

(A) 10 ohm

(B) 2 ohm

(C) 8 ohm

(D) 5 ohm

**Q18. The focal length of a concave mirror is 21 cm. An object at 25 cm forms image at:**

(A) 34 cm, real inverted

(B) 53 cm, real inverted

(C) 47 cm, real inverted

(D) 15 cm, real inverted

**Q19. The escape velocity from a planet of mass 8 x 10^24 kg and radius 6600 km is:**

(A) 10.1 km/s

(B) 9.9 km/s

(C) 14.9 km/s

(D) 14.3 km/s

**Q20. A spring with k = 388 N/m is compressed by 0.15 m. The stored PE is:**

(A) 15.44 J

(B) 15.02 J

(C) 4.98 J

(D) 20.86 J

**Q21. The focal length of a concave mirror is 29 cm. An object at 21 cm forms image at:**

(A) 20 cm, real inverted

(B) 43 cm, real inverted

(C) 37 cm, real inverted

(D) 52 cm, real inverted

**Q22. The de Broglie wavelength of an electron accelerated through 50 V is approximately:**

(A) 2.95 Angstrom

(B) 2.67 Angstrom

(C) 2.48 Angstrom

(D) 1.06 Angstrom

**Q23. A wire of resistance 19 ohm is bent into a circle. Effective resistance between diametrically opposite points is:**

(A) 8 ohm

(B) 8 ohm

(C) 2 ohm

(D) 6 ohm

**Q24. A convex lens of focal length 28 cm forms a real image of an object placed 26 cm away. The image distance is:**

(A) 28 cm

(B) 48 cm

(C) 21 cm

(D) 37 cm

**Q25. A Carnot engine operates between 446 K and 314 K. Its efficiency is:**

(A) 23%

(B) 31%

(C) 53%

(D) 30%

**Q26. The current through a 26 ohm resistor connected to a 7 V battery is:**

(A) 2.28 A

(B) 4.78 A

(C) 3.78 A

(D) 4.61 A

**Q27. An ideal gas at 292 K is heated at constant pressure to 489 K. The ratio of final to initial volume is:**

(A) 2.1

(B) 2.7

(C) 2.1

(D) 2.3

**Q28. The de Broglie wavelength of an electron accelerated through 150 V is approximately:**

(A) 1.83 Angstrom

(B) 0.65 Angstrom

(C) 2.04 Angstrom

(D) 2.40 Angstrom

**Q29. 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/s^2

(B) 1.16 m/s^2

(C) 1.73 m/s^2

(D) 4.13 m/s^2

**Q30. A body of mass 3 kg is moving in a circle of radius 4 m at 18 m/s. The centripetal force is:**

(A) 28 N

(B) 165 N

(C) 30 N

(D) 186 N

**Q31. 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) 35 cm

(C) 34 cm

(D) 25 cm

**Q32. A radioactive substance has half-life 14 days. The fraction remaining after 54 days is:**

(A) 1/4

(B) 1/16

(C) 1/8

(D) 1/4

**Q33. In photoelectric effect, the stopping potential for light of wavelength 260 nm on a metal with work function 2.9 eV is:**

(A) 0.69 V

(B) 2.94 V

(C) 3.39 V

(D) 2.43 V

**Q34. The work function of a metal is 1.6 eV. The threshold frequency is:**

(A) 10.62 x 10^14 Hz

(B) 9.14 x 10^14 Hz

(C) 11.96 x 10^14 Hz

(D) 3.11 x 10^14 Hz

**Q35. A convex lens of focal length 16 cm forms a real image of an object placed 22 cm away. The image distance is:**

(A) 15 cm

(B) 25 cm

(C) 45 cm

(D) 51 cm

**Q36. A radioactive substance has half-life 11 days. The fraction remaining after 58 days is:**

(A) 1/16

(B) 1/4

(C) 1/16

(D) 1/8

**Q37. The current through a 11 ohm resistor connected to a 12 V battery is:**

(A) 2.22 A

(B) 2.50 A

(C) 2.51 A

(D) 2.81 A

**Q38. A spring with k = 494 N/m is compressed by 0.17 m. The stored PE is:**

(A) 16.40 J

(B) 20.63 J

(C) 22.76 J

(D) 18.25 J

**Q39. An electron moves with velocity 2x10^6 m/s perpendicular to a magnetic field of 1.0 T. The radius of its path is:**

(A) 4.32 cm

(B) 1.88 cm

(C) 2.08 cm

(D) 3.93 cm

**Q40. 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

**Q41. 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) 2.3

(D) 2.4

**Q42. A ball is dropped from height 38 m. Its velocity just before hitting the ground is:**

(A) 27.1 m/s

(B) 24.3 m/s

(C) 47.5 m/s

(D) 23.2 m/s

**Q43. 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

**Q44. An electron moves with velocity 3x10^6 m/s perpendicular to a magnetic field of 0.7 T. The radius of its path is:**

(A) 0.85 cm

(B) 1.21 cm

(C) 3.79 cm

(D) 2.99 cm

**Q45. A solenoid of 145 turns and length 0.1 m carries current 4 A. The magnetic field inside is:**

(A) 9.69 mT

(B) 16.56 mT

(C) 1.19 mT

(D) 17.15 mT

**Q46. A projectile is launched at 45 degrees with initial velocity 22 m/s. The time of flight is approximately:**

(A) 4.6 s

(B) 3.9 s

(C) 2.9 s

(D) 3.3 s

**Q47. The electric field at 3 m from a point charge of 6 uC is:**

(A) 8811 N/C

(B) 672 N/C

(C) 1784 N/C

(D) 7047 N/C

**Q48. 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) 15289 N

(C) 16867 N

(D) 3916 N

**Q49. The de Broglie wavelength of an electron accelerated through 50 V is approximately:**

(A) 1.17 Angstrom

(B) 1.07 Angstrom

(C) 2.55 Angstrom

(D) 1.32 Angstrom

**Q50. The current through a 15 ohm resistor connected to a 21 V battery is:**

(A) 3.95 A

(B) 2.87 A

(C) 0.53 A

(D) 3.75 A

## Section 2: Chemistry (50 Questions)

**Q51. 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

**Q52. The IUPAC name of neopentane is:**

(A) Pentane

(B) 2,2-Dimethylpropane

(C) Cyclopentane

(D) 2-Methylbutane

**Q53. The equilibrium constant Kp and Kc are related by:**

(A) Kp = Kc/RT

(B) Kp = RT*Kc

(C) Kp = Kc(RT)^delta_n

(D) Kp = Kc

**Q54. Lanthanide contraction is caused by:**

(A) Poor shielding by 4f electrons

(B) High ionization energy

(C) Nuclear fusion

(D) Electron capture

**Q55. The cell potential for Zn|Zn2+||Cu2+|Cu cell is:**

(A) 0.34 V

(B) 0.76 V

(C) -0.76 V

(D) 1.10 V

**Q56. The major product of SN1 reaction of tert-butyl chloride with ethanol is:**

(A) tert-Butyl ethyl ether

(B) 2-Methylpropene

(C) tert-Butanol

(D) Isobutane

**Q57. The crystal field splitting energy in octahedral complex is:**

(A) Delta_oct

(B) 10Dq_tet

(C) Delta_tet

(D) Delta_sq

**Q58. Which of the following has the highest lattice energy?**

(A) NaBr

(B) NaCl

(C) NaF

(D) NaI

**Q59. Which element has the highest electronegativity?**

(A) Fluorine

(B) Chlorine

(C) Nitrogen

(D) Oxygen

**Q60. Gibbs free energy change for a spontaneous process is:**

(A) Positive

(B) Undefined

(C) Zero

(D) Negative

**Q61. According to Raoult's law, the vapour pressure of a solvent in solution is:**

(A) p = p0 * x_solute

(B) p = RT/V

(C) p = p0 * x_solvent

(D) p = p0 / x_solvent

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

(A) Delta_sq

(B) Delta_oct

(C) 10Dq_tet

(D) Delta_tet

**Q63. The product of dehydration of ethanol at 443 K is:**

(A) Ethylene (C2H4)

(B) Diethyl ether

(C) Acetaldehyde

(D) Acetic acid

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

(A) NaCl

(B) NaF

(C) NaI

(D) NaBr

**Q65. The shape of XeF4 is:**

(A) See-saw

(B) Square planar

(C) Octahedral

(D) Tetrahedral

**Q66. Colligative properties depend on:**

(A) Nature of solvent

(B) Number of solute particles

(C) Molar mass of solute

(D) Nature of solute

**Q67. The crystal field splitting energy in octahedral complex is:**

(A) Delta_sq

(B) Delta_oct

(C) 10Dq_tet

(D) Delta_tet

**Q68. The product of dehydration of ethanol at 443 K is:**

(A) Acetaldehyde

(B) Diethyl ether

(C) Ethylene (C2H4)

(D) Acetic acid

**Q69. The hybridization of C in acetylene is:**

(A) sp3

(B) sp2

(C) sp3d

(D) sp

**Q70. The major product of SN1 reaction of tert-butyl chloride with ethanol is:**

(A) Isobutane

(B) tert-Butyl ethyl ether

(C) 2-Methylpropene

(D) tert-Butanol

**Q71. The entropy change for an irreversible process is:**

(A) Equal to q/T

(B) Negative always

(C) Zero

(D) Greater than q_rev/T

**Q72. For an ideal gas, Cp - Cv equals:**

(A) 0

(B) R/2

(C) R (8.314 J/mol K)

(D) 2R

**Q73. The cell potential for Zn|Zn2+||Cu2+|Cu cell is:**

(A) 1.10 V

(B) -0.76 V

(C) 0.34 V

(D) 0.76 V

**Q74. VSEPR theory predicts the shape of SF6 as:**

(A) Octahedral

(B) Tetrahedral

(C) Square planar

(D) Trigonal bipyramidal

**Q75. Friedel-Crafts acylation uses which catalyst?**

(A) ZnCl2

(B) CuCl2

(C) FeCl3

(D) AlCl3

**Q76. Hess's law states that:**

(A) Entropy always increases

(B) Rate depends on concentration

(C) Enthalpy change is path independent

(D) Volume is constant

**Q77. The colour of KMnO4 is due to:**

(A) s-p transition

(B) f-f transition

(C) d-d transition

(D) Charge transfer transition

**Q78. The hybridization of Ni in [Ni(CN)4]2- is:**

(A) sp3

(B) d2sp3

(C) sp3d

(D) dsp2

**Q79. Williamson's synthesis is used to prepare:**

(A) Amines

(B) Esters

(C) Ethers

(D) Alcohols

**Q80. According to Raoult's law, the vapour pressure of a solvent in solution is:**

(A) p = RT/V

(B) p = p0 * x_solvent

(C) p = p0 * x_solute

(D) p = p0 / x_solvent

**Q81. For an endothermic reaction, increasing temperature:**

(A) Decreases rate

(B) Increases equilibrium constant

(C) No effect

(D) Decreases equilibrium constant

**Q82. The product of dehydration of ethanol at 443 K is:**

(A) Diethyl ether

(B) Ethylene (C2H4)

(C) Acetaldehyde

(D) Acetic acid

**Q83. The reagent for converting aldehyde to carboxylic acid is:**

(A) LiAlH4

(B) Zn-Hg / HCl

(C) KMnO4 / K2Cr2O7

(D) NaBH4

**Q84. The reagent for converting aldehyde to carboxylic acid is:**

(A) KMnO4 / K2Cr2O7

(B) Zn-Hg / HCl

(C) NaBH4

(D) LiAlH4

**Q85. For an ideal gas, Cp - Cv equals:**

(A) 2R

(B) R/2

(C) 0

(D) R (8.314 J/mol K)

**Q86. The colour of KMnO4 is due to:**

(A) s-p transition

(B) f-f transition

(C) d-d transition

(D) Charge transfer transition

**Q87. The equilibrium constant Kp and Kc are related by:**

(A) Kp = RT*Kc

(B) Kp = Kc(RT)^delta_n

(C) Kp = Kc

(D) Kp = Kc/RT

**Q88. The coordination number in BCC is:**

(A) 4

(B) 6

(C) 8

(D) 12

**Q89. The entropy change for an irreversible process is:**

(A) Greater than q_rev/T

(B) Equal to q/T

(C) Negative always

(D) Zero

**Q90. Grignard reagents react with dry CO2 to give:**

(A) Carboxylic acids

(B) Esters

(C) Alcohols

(D) Ketones

**Q91. The IUPAC name of CH3CH(OH)CH3 is:**

(A) Propan-2-ol

(B) 2-Methylethanol

(C) Propan-1-ol

(D) Isopropyl ether

**Q92. The coordination number in BCC is:**

(A) 6

(B) 12

(C) 8

(D) 4

**Q93. Grignard reagents react with dry CO2 to give:**

(A) Carboxylic acids

(B) Ketones

(C) Alcohols

(D) Esters

**Q94. The magnetic moment of Fe2+ (d6) in weak field is:**

(A) 2.83 BM

(B) 0 BM

(C) 4.9 BM (4 unpaired)

(D) 5.9 BM

**Q95. The van't Hoff factor for NaCl is approximately:**

(A) 2

(B) 1

(C) 0.5

(D) 3

**Q96. Markovnikov's rule applies to the addition of HBr to:**

(A) Ethene

(B) Methane

(C) Benzene

(D) Propene

**Q97. For a first-order reaction with k = 0.080 s^-1, the half-life is:**

(A) 20.0 s

(B) 13.9 s

(C) 15.0 s

(D) 10.0 s

**Q98. Wurtz reaction involves coupling of:**

(A) Acids with SOCl2

(B) Aryl halides with Cu

(C) Aldehydes with NaOH

(D) Alkyl halides with Na

**Q99. The ore of aluminium is:**

(A) Chalcopyrite

(B) Haematite

(C) Galena

(D) Bauxite

**Q100. Markovnikov's rule applies to the addition of HBr to:**

(A) Benzene

(B) Methane

(C) Propene

(D) Ethene

## Section 3: Biology (50 Questions)

**Q101. Antibodies are produced by:**

(A) B lymphocytes

(B) T lymphocytes

(C) Neutrophils

(D) Macrophages

**Q102. The study of fossils is called:**

(A) Histology

(B) Paleontology

(C) Ecology

(D) Taxonomy

**Q103. The site of protein synthesis is:**

(A) Ribosome

(B) Golgi

(C) Nucleus

(D) Lysosome

**Q104. Which is a vestigial organ in humans?**

(A) Kidney

(B) Liver

(C) Heart

(D) Appendix

**Q105. Mendel's law of segregation states that:**

(A) Alleles separate during gamete formation

(B) Genes are linked

(C) Traits blend

(D) Mutations are random

**Q106. Biodiversity hotspots have:**

(A) Cold climate

(B) High endemism and threat

(C) No endemic species

(D) Low species count

**Q107. Which is the site of transcription in eukaryotes?**

(A) Cytoplasm

(B) ER

(C) Nucleus

(D) Ribosome

**Q108. Monohybrid cross ratio is:**

(A) 3:1

(B) 9:3:3:1

(C) 1:2:1

(D) 1:1

**Q109. Blood group O is the universal:**

(A) Donor

(B) Recipient

(C) Both

(D) Neither

**Q110. The enzyme that joins Okazaki fragments is:**

(A) Helicase

(B) Primase

(C) DNA ligase

(D) Topoisomerase

**Q111. Insulin promotes:**

(A) Lipolysis

(B) Glycogenesis

(C) Glycogenolysis

(D) Gluconeogenesis

**Q112. The sex of a child is determined by:**

(A) Random

(B) Both equally

(C) Father's chromosome

(D) Mother's chromosome

**Q113. The powerhouse of the cell is:**

(A) Mitochondria

(B) Nucleus

(C) Ribosome

(D) Golgi body

**Q114. PCR is used to:**

(A) Culture cells

(B) Sequence proteins

(C) Stain tissues

(D) Amplify DNA

**Q115. Crossing over occurs during:**

(A) Anaphase II

(B) Telophase I

(C) Metaphase I

(D) Pachytene

**Q116. Which phylum includes starfish?**

(A) Arthropoda

(B) Chordata

(C) Mollusca

(D) Echinodermata

**Q117. Biogeochemical cycling of nitrogen includes:**

(A) Nitrification

(B) Glycolysis

(C) Photolysis

(D) Krebs cycle

**Q118. Ecological pyramid of energy is always:**

(A) Spindle-shaped

(B) Upright

(C) Inverted

(D) Both possible

**Q119. Peristalsis occurs in:**

(A) Alimentary canal

(B) Brain

(C) Lungs

(D) Bones

**Q120. Which hormone triggers ovulation?**

(A) Estrogen

(B) Progesterone

(C) LH

(D) FSH

**Q121. Which muscle type is involuntary and striated?**

(A) Smooth

(B) Skeletal

(C) Cardiac

(D) None of these

**Q122. The greenhouse effect is primarily caused by:**

(A) Argon

(B) $O_2$ and $N_2$

(C) Ozone only

(D) $CO_2$ and methane

**Q123. Xylem transports:**

(A) Amino acids

(B) Water and minerals

(C) Sugars

(D) Hormones

**Q124. The pacemaker of the heart is:**

(A) SA node

(B) AV node

(C) Purkinje fibers

(D) Bundle of His

**Q125. Primary succession occurs on:**

(A) Clear-cut area

(B) Burned forest

(C) Bare rock

(D) Abandoned farmland

**Q126. Ecological pyramid of energy is always:**

(A) Inverted

(B) Both possible

(C) Spindle-shaped

(D) Upright

**Q127. Which enzyme unwinds DNA during replication?**

(A) DNA polymerase

(B) Ligase

(C) Primase

(D) Helicase

**Q128. Stomata open when guard cells:**

(A) Become turgid

(B) Die

(C) Divide

(D) Lose water

**Q129. The lock-and-key model explains:**

(A) Cell division

(B) DNA replication

(C) Enzyme specificity

(D) Protein folding

**Q130. Restriction enzymes cut DNA at:**

(A) Telomeres

(B) Any sequence

(C) Palindromic sequences

(D) Centromeres

**Q131. Insulin promotes:**

(A) Glycogenesis

(B) Lipolysis

(C) Gluconeogenesis

(D) Glycogenolysis

**Q132. Which phylum includes starfish?**

(A) Mollusca

(B) Echinodermata

(C) Arthropoda

(D) Chordata

**Q133. The largest organ in the human body is:**

(A) Brain

(B) Liver

(C) Lungs

(D) Skin

**Q134. The lock-and-key model explains:**

(A) Protein folding

(B) Enzyme specificity

(C) DNA replication

(D) Cell division

**Q135. The oxygen-carrying pigment in blood is:**

(A) Chlorophyll

(B) Hemoglobin

(C) Cytochrome

(D) Myoglobin

**Q136. Biogeochemical cycling of nitrogen includes:**

(A) Glycolysis

(B) Krebs cycle

(C) Photolysis

(D) Nitrification

**Q137. Which organelle is involved in lipid synthesis?**

(A) Smooth ER

(B) Lysosome

(C) Golgi

(D) Rough ER

**Q138. The Krebs cycle occurs in:**

(A) ER

(B) Nucleus

(C) Mitochondrial matrix

(D) Cytoplasm

**Q139. Mitosis results in:**

(A) 2 identical daughter cells

(B) 1 large cell

(C) 3 cells

(D) 4 haploid cells

**Q140. Primary succession occurs on:**

(A) Clear-cut area

(B) Abandoned farmland

(C) Bare rock

(D) Burned forest

**Q141. Which vitamin deficiency causes scurvy?**

(A) Vitamin C

(B) Vitamin K

(C) Vitamin A

(D) Vitamin D

**Q142. Which blood cells are involved in clotting?**

(A) Platelets

(B) WBCs

(C) Plasma

(D) RBCs

**Q143. The pacemaker of the heart is:**

(A) SA node

(B) Purkinje fibers

(C) Bundle of His

(D) AV node

**Q144. Ozone layer is found in:**

(A) Troposphere

(B) Mesosphere

(C) Thermosphere

(D) Stratosphere

**Q145. Blood group O is the universal:**

(A) Neither

(B) Both

(C) Donor

(D) Recipient

**Q146. Crossing over occurs during:**

(A) Telophase I

(B) Metaphase I

(C) Anaphase II

(D) Pachytene

**Q147. The number of chromosomes in human gametes is:**

(A) 44

(B) 23

(C) 22

(D) 46

**Q148. The first life originated in:**

(A) Volcanoes

(B) Air

(C) Water

(D) Land

**Q149. The fluid mosaic model describes:**

(A) DNA structure

(B) Cell wall

(C) Protein folding

(D) Cell membrane structure

**Q150. Hardy-Weinberg equilibrium assumes:**

(A) Small population

(B) High mutation rate

(C) No mutation

(D) Selection pressure

# Answer Key

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