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NEET UG 2026 Prediction Paper (Set 3) — Free with Answer Key

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NEET 2026 · RESULTS IN

How did this prediction paper actually do? **65 of 180 questions predicted.**

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NEET UG 2026 — Prediction Paper

Set 3 | Full-Length Practice Paper

Based on NEW NTA 2026 Exam Pattern | ChapterNotes.in

TOTAL QUESTIONS

180

MAXIMUM MARKS

720

DURATION

3 hours

MARKING

+4 / -1

General Instructions (NEW 2026 Pattern)

1. This paper contains **180 questions** divided into 4 subjects: Physics, Chemistry, Botany and Zoology — **45 questions each**.
2. **All questions are compulsory.** Section B / optional questions have been removed by NTA from 2025 onwards. There is no choice.
3. Each correct answer carries **+4 marks**. Each wrong answer carries **-1 mark**. Unanswered questions carry **0 marks**.

4. Total duration: **3 hours (180 minutes)**.
5. Use of calculator, log tables, or any electronic device is **NOT permitted**.
6. This is a pen-paper OMR-based offline exam.
7. Assume standard values: $g = 10 \text{ m/s}^2$, $c = 3 \times 10^8 \text{ m/s}$, $h = 6.63 \times 10^{-34} \text{ J}\cdot\text{s}$, $e = 1.6 \times 10^{-19} \text{ C}$, $k = 9 \times 10^9 \text{ N}\cdot\text{m}^2/\text{C}^2$, $R = 8.314 \text{ J/K}\cdot\text{mol}$ unless stated otherwise.
8. **Set 3 angle:** Focused on numerical & application — multi-step problems, reaction sequences, calculation-heavy.

PHYSICS

45 Questions | 180 Marks | All Compulsory

Physics (Q1 to Q45)

All 45 questions are compulsory. +4 for correct, -1 for incorrect, 0 for unattempted.

Q1

A long straight wire carries a current of 10 A along the +x-axis. The magnetic field at a point P located 5 cm from the wire on the +y-axis is:

(a) $4 \times 10^{-5} \text{ T}$ along +z

(b) $4 \times 10^{-5} \text{ T}$ along -z

(c) $2 \times 10^{-5} \text{ T}$ along +z

(d) $8 \times 10^{-5} \text{ T}$ along -z

Q2

An electron moves with velocity $2 \times 10^6 \text{ m/s}$ perpendicular to a magnetic field of 0.5 T. The radius of its circular path is:

(a) $2.27 \times 10^{-5} \text{ m}$

(b) $1.14 \times 10^{-5} \text{ m}$

(c) $4.55 \times 10^{-5} \text{ m}$

(d) $2.27 \times 10^{-4} \text{ m}$

Q3

A coil of 200 turns and area 0.01 m^2 is placed in a magnetic field that changes uniformly from 0.1 T to 0.5 T in 0.2 s. The induced EMF is:

(a) 4 V

(b) 2 V

(c) 0.4 V

(d) 8 V

Q4

In an LR series circuit, $L = 0.2 \text{ H}$ and $R = 10 \Omega$. The time constant is:

(a) 0.02 s

(b) 0.05 s

(c) 2 s

(d) 0.2 s

Q5

In a series LCR circuit, $R = 30 \Omega$, $X_L = 80 \Omega$, $X_C = 40 \Omega$. The phase angle by which voltage leads current is:

(a) 53°

(b) 37°

(c) 45°

(d) 30°

Q6

Two point charges $+4 \mu\text{C}$ and $-1 \mu\text{C}$ are placed 30 cm apart. The point on the line joining them where the electric potential is zero (other than infinity) is at a distance from $+4 \mu\text{C}$ of:

(a) 24 cm

(b) 20 cm

(c) 6 cm

(d) 18 cm

Q7

A $4 \mu\text{F}$ capacitor is charged to 100 V and then disconnected from the battery. It is then connected in parallel with an uncharged $6 \mu\text{F}$ capacitor. The energy lost is:

(a) 12 mJ

(b) 8 mJ

(c) 4 mJ

(d) 20 mJ

Q8

Four point charges, each $+q$, are placed at the four corners of a square of side a . The electric potential at the centre is:

(a) $4\sqrt{2} kq/a$

(b) kq/a

(c) $4kq/a$

(d) $2kq/a$

Q9

A parallel plate capacitor of capacitance $2 \mu\text{F}$ is connected to a 10 V battery. Keeping it connected, the plate separation is doubled. The new energy stored is:

(a) $50 \mu\text{J}$

(b) $200 \mu\text{J}$

(c) $100 \mu\text{J}$

(d) $25 \mu\text{J}$

Q10

A potentiometer wire of length 10 m has resistance 5Ω and is connected in series with a battery of EMF 2 V and internal resistance 5Ω . The potential gradient on the wire is:

(a) 0.1 V/m

(b) 0.2 V/m

(c) 0.05 V/m

(d) 1 V/m

Q11

A 60 W and a 100 W bulb, both rated for 220 V , are connected in series across a 220 V supply. The actual power consumed by the 60 W bulb is approximately:

(a) 23 W

(b) 36 W

(c) 60 W

(d) 86 W

Q12

Twelve identical resistors each of resistance R are connected to form a cube. The equivalent resistance between two diagonally opposite corners (body diagonal) is:

(a) $5R/6$

(b) $7R/12$

(c) R

(d) $3R/4$

Q13

A galvanometer of resistance $50\ \Omega$ gives full-scale deflection at 2 mA . To convert it into an ammeter of range 5 A , the shunt resistance required is approximately:

(a) $0.02\ \Omega$

(b) $0.05\ \Omega$

(c) $0.1\ \Omega$

(d) $2\ \Omega$

Q14

A convex lens of focal length 20 cm forms a real image of magnification -2 . The object distance is:

(a) 30 cm

(b) 40 cm

(c) 15 cm

(d) 60 cm

Q15

A ray of light is incident on a glass slab ($n = 1.5$) at 60° . The angle of refraction is approximately:

(a) 35.3°

(b) 45°

(c) 30°

(d) 40°

Q16

A telescope has an objective of focal length 100 cm and an eyepiece of focal length 5 cm. In normal adjustment, its magnifying power and length are:

(a) 20, 105 cm

(b) 20, 95 cm

(c) 100, 105 cm

(d) 5, 100 cm

Q17

In Young's double slit experiment, the slit separation is doubled and the screen distance is halved. The new fringe width compared to the original is:

(a) one-fourth

(b) four times

(c) unchanged

(d) half

Q18

A hydrogen atom in the ground state absorbs 12.75 eV of energy. The principal quantum number of the excited state reached is:

(a) 4

(b) 3

(c) 5

(d) 2

Q19

The wavelength of the second line of the Balmer series of hydrogen ($n=4$ to $n=2$) is approximately ($R_H = 1.097 \times 10^7 \text{ m}^{-1}$):

(a) 486 nm

(b) 656 nm

(c) 410 nm

(d) 389 nm

Q20

The kinetic energy of an electron in the third Bohr orbit of hydrogen atom is:

(a) 1.51 eV

(b) 3.4 eV

(c) 13.6 eV

(d) 0.85 eV

Q21

Light of wavelength 500 nm falls on a metal of work function 1.9 eV. The maximum kinetic energy of emitted photoelectrons is approximately ($hc = 1240 \text{ eV}\cdot\text{nm}$):

(a) 0.58 eV

(b) 1.0 eV

(c) 2.48 eV

(d) 1.9 eV

Q22

In a nuclear reactor, the binding energy per nucleon is 7.6 MeV for ^{235}U and 8.5 MeV for the fission products (mass number ~ 117). Approximate energy released per fission is:

(a) $\sim 210 \text{ MeV}$

(b) $\sim 117 \text{ MeV}$

(c) $\sim 90 \text{ MeV}$

(d) $\sim 30 \text{ MeV}$

Q23

A block of mass 5 kg is placed on an inclined plane ($\mu = 0.2$) making 30° with horizontal. The acceleration of the block down the incline is ($g = 10 \text{ m/s}^2$):

(a) 3.27 m/s^2

(b) 2 m/s^2

(c) 5 m/s^2

(d) 1.73 m/s^2

Q24

A bullet of mass 20 g moving at 400 m/s embeds itself in a wooden block of mass 1.98 kg suspended by a string. The height to which the block rises is ($g = 10 \text{ m/s}^2$):

(a) 0.8 m

(b) 1.6 m

(c) 0.4 m

(d) 8 m

Q25

A force $F = 6t$ N acts on a body of mass 2 kg initially at rest. The velocity at $t = 4$ s is:

(a) 24 m/s

(b) 12 m/s

(c) 48 m/s

(d) 6 m/s

Q26

A block of mass 4 kg moves with initial speed 10 m/s on a rough surface ($\mu = 0.25$) and comes to rest. The work done by friction is ($g = 10 \text{ m/s}^2$):

(a) -200 J

(b) -100 J

(c) -400 J

(d) -50 J

Q27

A particle of mass 2 kg is projected vertically upward with KE 100 J. Air drag does 20 J of negative work during ascent. The maximum height reached is ($g = 10 \text{ m/s}^2$):

(a) 4 m

(b) 5 m

(c) 6 m

(d) 8 m

Q28

A solid cylinder of mass 2 kg and radius 0.1 m rolls without slipping with linear speed 5 m/s. Its total kinetic energy is:

(a) 37.5 J

(b) 25 J

(c) 50 J

(d) 12.5 J

Q29

A flywheel of moment of inertia $2 \text{ kg}\cdot\text{m}^2$ is rotating at 60 rad/s . A constant torque of $4 \text{ N}\cdot\text{m}$ opposes the motion. Time taken to stop is:

(a) 30 s

(b) 15 s

(c) 60 s

(d) 120 s

Q30

An ideal gas undergoes a cyclic process: $A \rightarrow B$ (isobaric expansion), $B \rightarrow C$ (isochoric cooling), $C \rightarrow A$ (isothermal compression). If work done in $A \rightarrow B$ is $+600 \text{ J}$ and heat absorbed in $C \rightarrow A$ is -400 J , the net work in the cycle is:

(a) $+200 \text{ J}$

(b) $+1000 \text{ J}$

(c) -200 J

(d) 0

Q31

A Carnot engine operates between 400 K and 300 K . If it absorbs 800 J from the source, the work done is:

(a) 200 J

(b) 100 J

(c) 600 J

(d) 400 J

Q32

Two moles of an ideal monoatomic gas are heated at constant pressure from 300 K to 400 K . Heat supplied is approximately ($R = 8.314 \text{ J/K}\cdot\text{mol}$):

(a) 4157 J

(b) 2494 J

(c) 1663 J

(d) 8314 J

Q33

A particle executes SHM with amplitude 5 cm and time period 2 s. Its maximum acceleration is:

(a) $0.05\pi^2 \text{ m/s}^2$

(b) $0.5\pi^2 \text{ m/s}^2$

(c) $\pi^2 \text{ m/s}^2$

(d) $2\pi^2 \text{ m/s}^2$

Q34

A wave on a string is described by $y = 0.02 \sin(2\pi x - 100\pi t)$ m. Speed of the wave is:

(a) 50 m/s

(b) 100 m/s

(c) 25 m/s

(d) 200 m/s

Q35

An open organ pipe of length 0.5 m has its first overtone (second harmonic) at frequency ($v_{\text{sound}} = 340 \text{ m/s}$):

(a) 680 Hz

(b) 340 Hz

(c) 1020 Hz

(d) 170 Hz

Q36

A steel wire of length 4 m and cross-sectional area $2 \times 10^{-6} \text{ m}^2$ is stretched by 1 mm. If Young's modulus of steel is $2 \times 10^{11} \text{ Pa}$, the force applied is:

(a) 100 N

(b) 200 N

(c) 50 N

(d) 500 N

Q37

A spherical drop of radius 1 mm breaks into 1000 identical droplets. If surface tension is 0.075 N/m, the energy required is approximately:

(a) 8.48×10^{-6} J**(b)** 9.42×10^{-7} J**(c)** 9.42×10^{-5} J**(d)** 2.83×10^{-6} J**Q38**

A Zener diode has breakdown voltage 6 V. It is connected in series with a $100\ \Omega$ resistor across an unregulated 9 V supply. The current through the Zener if load draws 20 mA is:

(a) 10 mA**(b)** 30 mA**(c)** 20 mA**(d)** 5 mA**Q39**

In a half-wave rectifier with input frequency 50 Hz, the ripple frequency at output is:

(a) 50 Hz**(b)** 100 Hz**(c)** 25 Hz**(d)** 0 Hz**Q40**

The time period of a satellite orbiting close to Earth's surface ($R = 6.4 \times 10^6$ m, $g = 10$ m/s²) is approximately:

(a) 84.6 min**(b)** 60 min**(c)** 100 min**(d)** 24 hr**Q41**

A body weighs 200 N on the surface of Earth. Its weight at a height equal to half the Earth's radius is:

(a) ~89 N

(b) 100 N

(c) 50 N

(d) 150 N

Q42

A projectile is fired with initial velocity $(3\hat{i} + 4\hat{j}) \times 10$ m/s. Its horizontal range is ($g = 10$ m/s²):

(a) 240 m

(b) 120 m

(c) 480 m

(d) 320 m

Q43

A particle moves along x-axis with velocity $v = 6 + 4t$ m/s. The displacement between $t = 1$ s and $t = 3$ s is:

(a) 28 m

(b) 20 m

(c) 16 m

(d) 32 m

Q44

The electric field of a plane EM wave is $E = 50 \sin(\omega t - kz)$ V/m along x-axis. The peak magnetic field magnitude is:

(a) 1.67×10^{-7} T

(b) $50/3 \times 10^{-8}$ T

(c) 3×10^{-8} T

(d) 6×10^{-9} T

Q45

In a screw gauge, the pitch is 0.5 mm and there are 50 divisions on the circular scale. The least count is:

(a) 0.01 mm

(b) 0.001 mm

(c) 0.05 mm

(d) 0.1 mm

CHEMISTRY

45 Questions | 180 Marks | All Compulsory

Chemistry (Q46 to Q90)

All 45 questions are compulsory. +4 for correct, -1 for incorrect, 0 for unattempted.

Q46

The empirical formula of a compound is CH_2O and its molar mass is 180 g/mol. The molecular formula is:

(a) $\text{C}_3\text{H}_6\text{O}_3$

(b) $\text{C}_5\text{H}_{10}\text{O}_5$

(c) $\text{C}_6\text{H}_{12}\text{O}_6$

(d) $\text{C}_4\text{H}_8\text{O}_4$

Q47

How many grams of NaOH ($M = 40$) are required to prepare 250 mL of 0.2 M solution?

(a) 1.0 g

(b) 2.0 g

(c) 4.0 g

(d) 8.0 g

Q48

The energy of an electron in the second Bohr orbit of the H atom is ($E_1 = -13.6$ eV):

(a) -13.6 eV

(b) -6.8 eV

(c) -3.4 eV

(d) -1.51 eV

Q49

The de Broglie wavelength of an electron ($m = 9.1 \times 10^{-31}$ kg) moving at 2×10^6 m/s is approximately ($h = 6.6 \times 10^{-34}$ J·s):

(a) 3.6×10^{-10} m

(b) 7.3×10^{-10} m

(c) 3.6×10^{-7} m

(d) 7.3×10^{-7} m

Q50

Which of the following molecules has zero dipole moment?

(a) NH_3

(b) H_2O

(c) CHCl_3

(d) BF_3

Q51

The number of lone pairs on the central atom in XeF_2 is:

(a) 1

(b) 2

(c) 3

(d) 4

Q52

The correct order of bond angle is:

(a) $\text{NH}_3 > \text{H}_2\text{O} > \text{H}_2\text{S}$

(b) $\text{H}_2\text{O} > \text{NH}_3 > \text{H}_2\text{S}$

(c) $\text{NH}_3 > \text{H}_2\text{S} > \text{H}_2\text{O}$

(d) $\text{H}_2\text{S} > \text{NH}_3 > \text{H}_2\text{O}$

Q53

In which of the following molecules does the central atom undergo sp^3d^2 hybridisation?

(a) PCl_5

(b) BrF_5

(c) SF_6

(d) XeF_2

Q54

For an ideal gas undergoing isothermal expansion:

(a) $\Delta U = 0, q = w$

(b) $\Delta U = 0, q = -w$

(c) $\Delta U > 0, q = w$

(d) $\Delta U < 0, q = -w$

Q55

For a reaction, $\Delta H = -80 \text{ kJ/mol}$ and $\Delta S = -0.2 \text{ kJ/K/mol}$. The temperature above which the reaction becomes non-spontaneous is:

(a) 200 K

(b) 300 K

(c) 400 K

(d) 500 K

Q56

Vapour pressures of pure liquids A and B are 100 and 200 mm Hg respectively at 298 K. If 2 moles of A and 3 moles of B form an ideal solution, the total vapour pressure is:

(a) 140 mm Hg

(b) 160 mm Hg

(c) 180 mm Hg

(d) 200 mm Hg

Q57

The molal elevation constant of water is 0.52 K kg/mol . The boiling point of a solution containing 6 g of urea ($M = 60$) in 200 g of water is:

(a) 100.13°C

(b) 100.26°C

(c) 100.52°C

(d) 101.04°C

Q58

For the reaction $2\text{SO}_2(\text{g}) + \text{O}_2(\text{g}) \rightleftharpoons 2\text{SO}_3(\text{g})$, $K_c = 4$. If 1 mole each of SO_2 and O_2 are mixed in 1 L vessel, the degree of dissociation expression at equilibrium uses:

(a) Reactants increase

(b) Equilibrium shifts left on adding catalyst

(c) $K_p = K_c(RT)^{-1}$

(d) $K_p = K_c(RT)$

Q59

The solubility product of AgCl is 1.6×10^{-10} . The solubility of AgCl in 0.1 M NaCl solution is:

(a) 1.6×10^{-9} M

(b) 1.6×10^{-10} M

(c) 1.26×10^{-5} M

(d) 4×10^{-5} M

Q60

For the cell $\text{Zn}|\text{Zn}^{2+}(0.01\text{M})||\text{Cu}^{2+}(1\text{M})|\text{Cu}$, $E^\circ_{\text{cell}} = 1.10$ V. The cell EMF at 298 K is (use $0.0591/n \log$):

(a) 1.041 V

(b) 1.100 V

(c) 1.159 V

(d) 1.218 V

Q61

How long (in seconds) must a current of 2 A be passed through molten NaCl to deposit 4.6 g of Na (atomic mass 23)? ($F = 96500$ C/mol)

(a) 4825 s

(b) 9650 s

(c) 19300 s

(d) 2412 s

Q62

The molar conductivity of a 0.001 M weak acid HA is $50 \text{ S cm}^2 \text{ mol}^{-1}$. If $\Lambda^\circ_m = 500 \text{ S cm}^2 \text{ mol}^{-1}$, the degree of dissociation is:

(a) 0.01

(b) 0.05

(c) 0.10

(d) 0.25

Q63

For a first-order reaction, the rate constant is $6.93 \times 10^{-3} \text{ s}^{-1}$. The time required for 75% completion is ($\ln 2 = 0.693$):

(a) 100 s

(b) 150 s

(c) 200 s

(d) 300 s

Q64

The rate of a reaction at 300 K is $1.0 \times 10^{-3} \text{ mol/L/s}$. At 320 K the rate is $8.0 \times 10^{-3} \text{ mol/L/s}$. Using log scale, activation energy ($R = 8.314 \text{ J/K/mol}$; $\log 8 = 0.903$) is approximately:

(a) 62 kJ/mol

(b) 83 kJ/mol

(c) 104 kJ/mol

(d) 125 kJ/mol

Q65

Which of the following has the highest first ionisation enthalpy?

(a) B

(b) C

(c) N

(d) O

Q66

In boric acid (H_3BO_3), each B atom is:

(a) sp hybridised, linear

(b) sp^2 hybridised, trigonal planar

(c) sp^3 hybridised, tetrahedral

(d) sp^3d hybridised, trigonal bipyramidal

Q67

Which of the following oxoacids of phosphorus has P in the +3 oxidation state?

(a) H_3PO_4

(b) H_3PO_3

(c) $H_4P_2O_7$

(d) HPO_3

Q68

Among the noble gases, the one used to fill weather balloons (after H_2) is:

(a) Helium

(b) Neon

(c) Argon

(d) Krypton

Q69

Acidified $KMnO_4$ on reaction with oxalic acid in hot solution gives:

(a) $MnO_2 + CO_2$

(b) $Mn^{2+} + CO_2$

(c) $MnO_4^{2-} + CO$

(d) $Mn_2O_3 + CO_2$

Q70

In $K_2Cr_2O_7$, the number of Cr–O–Cr bridges is:

(a) 0

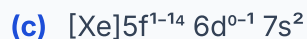
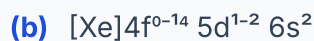
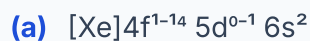
(b) 1

(c) 2

(d) 3

Q71

The general electronic configuration of lanthanoids is:



Q72

The IUPAC name of $[\text{Pt}(\text{NH}_3)_2\text{Cl}_2]$ is:



Q73

The number of geometrical isomers of $[\text{Co}(\text{NH}_3)_3\text{Cl}_3]$ is:



Q74

In $[\text{Fe}(\text{CN})_6]^{3-}$, the hybridisation, number of unpaired electrons, and magnetic nature are:



Q75

For an octahedral d^5 complex with weak-field ligand, the crystal field stabilisation energy (CFSE) is:



Q76

Reaction of $\text{CH}_3\text{CH}_2\text{Br}$ with aqueous KOH gives $\text{CH}_3\text{CH}_2\text{OH}$, while with alcoholic KOH gives:

(a) CH_3CHO **(b)** $\text{CH}_2=\text{CH}_2$ **(c)** $\text{CH}_3\text{CH}_2\text{OK}$ **(d)** CH_3COOH **Q77**

In the reaction sequence: $\text{CH}_3\text{CH}_2\text{Br} \xrightarrow{\text{KCN}} \text{A} \xrightarrow{\text{H}_3\text{O}^+/\Delta} \text{B}$; the product B is:

(a) $\text{CH}_3\text{CH}_2\text{OH}$ **(b)** $\text{CH}_3\text{CH}_2\text{COOH}$ **(c)** CH_3COOH **(d)** $\text{CH}_3\text{CH}_2\text{NH}_2$ **Q78**

Treatment of propene with HBr in presence of organic peroxide gives mainly:

(a) 2-bromopropane**(b)** 1-bromopropane**(c)** Propan-1-ol**(d)** 1,2-dibromopropane**Q79**

Reaction sequence: $\text{CH}_3\text{CHO} \xrightarrow{\text{(i) CH}_3\text{MgBr; (ii) H}_3\text{O}^+} \text{A}$. Product A is:

(a) Ethanol**(b)** Propan-1-ol**(c)** Propan-2-ol**(d)** Butan-2-ol**Q80**

In the reaction: Benzene $\xrightarrow{\text{CH}_3\text{COCl}/\text{AlCl}_3} \text{A} \xrightarrow{\text{Zn-Hg}/\text{HCl}} \text{B}$; product B is:

(a) Acetophenone**(b)** Toluene

(c) Ethylbenzene

(d) Cumene

Q81

Williamson ether synthesis: t-butoxide + ethyl bromide gives mainly:

(a) Ethyl t-butyl ether

(b) Isobutylene + ethanol

(c) 2-butanol

(d) Diethyl ether

Q82

Reimer-Tiemann reaction of phenol gives:

(a) Salicylaldehyde

(b) Salicylic acid

(c) Benzaldehyde

(d) Anisole

Q83

Reaction sequence: $\text{CH}_3\text{CH}_2\text{OH} \xrightarrow{\text{PCC}} \text{A} \xrightarrow{\text{NaOH}/\Delta} \text{then } \text{H}^+ \rightarrow \text{B}$. The product B is (aldol):

(a) 2-butanone

(b) But-2-enal (crotonaldehyde)

(c) Acetic acid

(d) Butan-1-ol

Q84

$\text{HCHO} + \text{conc. NaOH}$ gives (Cannizzaro reaction):

(a) $\text{HCOO}^- + \text{CH}_3\text{OH}$

(b) $\text{HCOOH} + \text{CH}_3\text{OH}$

(c) $\text{HCOONa} + \text{HCOONa}$

(d) $\text{CH}_3\text{CHO} + \text{HCOOH}$

Q85

Wolff–Kishner reduction of acetone gives:

(a) Propan-2-ol

(b) Propane

(c) Propene

(d) Propanoic acid

Q86

Reaction sequence: $\text{C}_6\text{H}_5\text{NO}_2 \xrightarrow{\text{Sn/HCl}}$ A $\xrightarrow{\text{NaNO}_2/\text{HCl}, 273 \text{ K}}$ B. The product B is:

(a) Benzenediazonium chloride

(b) Aniline

(c) Phenol

(d) Nitrosobenzene

Q87

Hofmann bromamide reaction converts CH_3CONH_2 to:

(a) CH_3NH_2

(b) CH_3CN

(c) $\text{CH}_3\text{CH}_2\text{NH}_2$

(d) HCONHCH_3

Q88

The disaccharide that does NOT show mutarotation is:

(a) Maltose

(b) Lactose

(c) Sucrose

(d) Cellobiose

Q89

Which vitamin deficiency causes pernicious anaemia?

(a) Vitamin C

(b) Vitamin B₆

(c) Vitamin B₁₂

(d) Vitamin K

Q90

The base which is present in DNA but not in RNA is:

(a) Adenine

(b) Cytosine

(c) Guanine

(d) Thymine

BOTANY

45 Questions | 180 Marks | All Compulsory

Botany (Q91 to Q135)

All 45 questions are compulsory. +4 for correct, -1 for incorrect, 0 for unattempted.

Q91

In a population in Hardy-Weinberg equilibrium, the frequency of the recessive allele (q) is 0.3. What is the frequency of heterozygous individuals?

(a) 0.09

(b) 0.21

(c) 0.42

(d) 0.49

Q92

In maize, a cross between a tall plant (TT) and a dwarf plant (tt) produces F₁. When F₁ plants are self-pollinated, what fraction of F₂ will be homozygous dominant?

(a) $\frac{1}{4}$

(b) $\frac{1}{2}$

(c) $\frac{3}{4}$

(d) $\frac{1}{16}$

Q93

In the Calvin cycle, fixation of 6 molecules of CO_2 to form one molecule of glucose requires:

(a) 12 ATP and 12 NADPH

(b) 18 ATP and 12 NADPH

(c) 12 ATP and 18 NADPH

(d) 6 ATP and 6 NADPH

Q94

In a grassland ecosystem, if the producers fix 1000 J of energy, how much energy (approximately) will be available to secondary consumers as per the 10% law?

(a) 100 J

(b) 10 J

(c) 1 J

(d) 0.1 J

Q95

In recombinant DNA technology, the enzyme that joins the sticky ends of DNA fragments is:

(a) DNA polymerase

(b) DNA gyrase

(c) DNA ligase

(d) Restriction endonuclease

Q96

A plant heterozygous for two genes (AaBb) when self-pollinated produced 1600 offspring. How many are expected to be of genotype aabb?

(a) 100

(b) 200

(c) 400

(d) 900

Q97

For the synthesis of one molecule of glucose during photosynthesis, how many turns of the Calvin cycle are required?

(a) 3

(b) 6

(c) 12

(d) 18

Q98

In an experiment, 84% of individuals in a population are of dominant phenotype and 16% recessive. As per Hardy-Weinberg, the frequency of dominant allele (p) is:

(a) 0.4

(b) 0.6

(c) 0.7

(d) 0.8

Q99

Which of the following restriction enzymes is isolated from *Haemophilus influenzae* and recognises the sequence AAGCTT?

(a) EcoRI

(b) BamHI

(c) HindIII

(d) PstI

Q100

In a population of 1000 mice, 360 are homozygous recessive (bb) for a coat colour gene. Assuming Hardy-Weinberg equilibrium, the number of heterozygous individuals is approximately:

(a) 160

(b) 320

(c) 480

(d) 640

Q101

In glycolysis, the substrate-level phosphorylation steps yield how many ATP molecules per glucose (gross)?

(a) 2

(b) 4

(c) 6

(d) 8

Q102

In a pyramid of energy with 4 trophic levels, if producers contain 10,000 kcal, the energy at the tertiary consumer level (top carnivore) will be:

(a) 1000 kcal

(b) 100 kcal

(c) 10 kcal

(d) 1 kcal

Q103

In *Drosophila*, white-eye colour is X-linked recessive. A cross between a white-eyed female (X^wX^w) and a red-eyed male (X^+Y) produces:

(a) All red-eyed offspring

(b) All white-eyed offspring

(c) Red-eyed females, white-eyed males

(d) White-eyed females, red-eyed males

Q104

The total number of ATP produced from one molecule of NADH and one $FADH_2$ in oxidative phosphorylation is:

(a) 3 and 2

(b) 2.5 and 1.5

(c) 5

(d) 2 and 3

Q105

In *E. coli*, if the lac operon has a defective *i*-gene (i^-), the result will be:

(a) No β -galactosidase synthesis

(b) Constitutive synthesis of β -galactosidase

(c) Synthesis only with lactose

(d) Synthesis only with glucose

Q106

If a DNA molecule contains 30% adenine, the percentage of guanine will be:

(a) 20%

(b) 30%

(c) 40%

(d) 60%

Q107

Plasmid pBR322 used as a cloning vector contains the gene *rop*, which codes for:

(a) Replication initiation

(b) Antibiotic resistance to tetracycline

(c) Proteins involved in replication of plasmid

(d) Origin of replication

Q108

The number of meiotic divisions required to produce 200 grains of pollen is:

(a) 100

(b) 50

(c) 200

(d) 400

Q109

In a logistic growth equation $dN/dt = rN(K-N/K)$, if $N = K$, the rate of population growth is:

(a) Maximum

(b) Minimum

(c) Zero

(d) Negative

Q110

In *Agrobacterium tumefaciens*-mediated gene transfer, the vector used is:

(a) Cosmid

(b) Ti plasmid

(c) Ri plasmid

(d) Lambda phage

Q111

In an angiosperm, the number of mitotic divisions required in the megaspore mother cell to form a mature embryo sac (*Polygonum* type) is:

(a) 1

(b) 2

(c) 3

(d) 4

Q112

In a typical diploid ($2n=20$) cell undergoing mitosis, how many chromatids are present at metaphase?

(a) 10

(b) 20

(c) 40

(d) 80

Q113

A diploid cell with 24 chromosomes undergoes meiosis. The number of chromosomes in each daughter cell at the end of meiosis II will be:

(a) 6

(b) 12

(c) 24

(d) 48

Q114

In a cell undergoing mitosis, if the duration of S phase is 8 hours and total cell cycle is 24 hours, what fraction of the cycle is spent in DNA synthesis?

(a) $\frac{1}{2}$

(b) $\frac{1}{3}$

(c) $\frac{1}{4}$

(d) $\frac{1}{6}$

Q115

The cell organelle that contains its own DNA, ribosomes (70S type), and divides by fission is:

(a) Lysosome

(b) Golgi apparatus

(c) Mitochondria

(d) Endoplasmic reticulum

Q116

In an E. coli cell, if generation time is 20 minutes, the number of cells produced from one cell after 2 hours under ideal conditions will be:

(a) 32

(b) 64

(c) 128

(d) 256

Q117

Pollen grains can be stored for years in liquid nitrogen at:

(a) -20°C

(b) -80°C

(c) -196°C

(d) -273°C

Q118

In Krebs cycle, oxidation of one molecule of acetyl-CoA produces:

(a) 1 ATP, 3 NADH, 1 FADH₂

(b) 2 ATP, 3 NADH, 1 FADH₂

(c) 1 ATP, 2 NADH, 2 FADH₂

(d) 3 ATP, 1 NADH, 1 FADH₂

Q119

If 100 microspore mother cells undergo meiosis, the number of pollen grains formed and the number of male gametes available for fertilisation are:

(a) 100 and 200

(b) 200 and 400

(c) 400 and 800

(d) 400 and 400

Q120

In a chasmogamous flower with bisexual condition, if all anthers are removed before dehiscence, this technique is called:

(a) Bagging

(b) Emasculation

(c) Hybridisation

(d) Pollination

Q121

Which of the following bacteria is used as a biofertiliser for non-leguminous plants and forms loose association with roots?

(a) Rhizobium

(b) Azospirillum

(c) Anabaena

(d) Frankia

Q122

Statins used for lowering blood cholesterol are obtained from:

(a) Trichoderma polysporum

(b) Monascus purpureus

(c) Penicillium notatum

(d) Streptococcus

Q123

The non-reducing sugar sucrose is a disaccharide made up of:

(a) Glucose + Glucose

(b) Glucose + Fructose

(c) Glucose + Galactose

(d) Fructose + Fructose

Q124

If the velocity of an enzyme-catalysed reaction at substrate concentration $[S] = K_m$ is V , then V_{max} of the reaction is:

(a) $V/2$

(b) V

(c) $2V$

(d) $4V$

Q125

The stomatal aperture opens when:

(a) K^+ moves into guard cells, causing turgidity

(b) K^+ moves out of guard cells

(c) Water moves out of guard cells

(d) Sugar concentration in guard cells decreases

Q126

In dicot stems, the cambial ring producing secondary xylem inwards and secondary phloem outwards is composed of:

(a) Only fascicular cambium

(b) Only interfascicular cambium

(c) Fascicular + interfascicular cambium

(d) Cork cambium only

Q127

During cyclic photophosphorylation, the number of ATP molecules generated per electron pair (without NADPH formation) is approximately:

(a) 1 ATP and 1 NADPH

(b) 2 ATP and no NADPH

(c) 2 ATP and 1 NADPH

(d) No ATP, only NADPH

Q128

The tissue that arises from the pericycle and gives rise to lateral roots is:

(a) Endodermis

(b) Cortex

(c) Periderm

(d) Pericycle itself

Q129

In *Chlamydomonas*, sexual reproduction takes place by formation of:

(a) Zoospores only

(b) Iso-, aniso- or oogamous gametes

(c) Conjugation tubes

(d) Akinetes

Q130

Which of the following gymnosperms is the source of the anti-cancer drug taxol?

(a) Pinus

(b) Cycas

(c) Taxus

(d) Ginkgo

Q131

Lichens are an example of mutualism between:

(a) Algae and bryophyte

(b) Fungi and bryophyte

(c) Algae and fungi

(d) Two fungi

Q132

In a virus, the protein coat that encloses the nucleic acid is called:

(a) Capsule

(b) Capsid

(c) Cell wall

(d) Plasma membrane

Q133

The species-area relationship described by Alexander von Humboldt follows the equation $\log S = \log C + Z \log A$. The slope Z (regression coefficient) for most groups lies in the range:

(a) 0.1 to 0.2

(b) 0.6 to 1.2

(c) 1.5 to 2.0

(d) 0.01 to 0.05

Q134

In the Cuscuta plant, the modified roots that absorb nutrients from the host are:

(a) Pneumatophores

(b) Haustoria

(c) Mycorrhiza

(d) Velamen

Q135

The plant hormone that delays senescence and breaks apical dominance by promoting lateral bud growth is:

(a) Auxin

(b) Gibberellin

(c) Cytokinin

(d) Ethylene

ZOOLOGY

45 Questions | 180 Marks | All Compulsory

Zoology (Q136 to Q180)

All 45 questions are compulsory. +4 for correct, -1 for incorrect, 0 for unattempted.

Q136

A person inhales 500 mL of air per breath at 12 breaths per minute. What is his pulmonary ventilation per minute?

(a) 3000 mL

(b) 5000 mL

(c) 6000 mL

(d) 8000 mL

Q137

If TV = 500 mL, IRV = 2500 mL and ERV = 1100 mL, the Inspiratory Capacity (IC) of the person is:

(a) 3000 mL

(b) 3600 mL

(c) 4100 mL

(d) 1600 mL

Q138

If a person's stroke volume is 70 mL and heart rate is 75 beats/min, his cardiac output will be:

(a) 4250 mL/min

(b) 5000 mL/min

(c) 5250 mL/min

(d) 5500 mL/min

Q139

A man with blood group AB marries a woman with blood group O. What are the possible blood groups of their children?

(a) A and B only

(b) A, B, AB and O

(c) AB only

(d) O only

Q140

In a monohybrid cross between two heterozygous tall pea plants ($Tt \times Tt$), the phenotypic ratio in F_2 is:

(a) 1:1

(b) 3:1

(c) 9:3:3:1

(d) 1:2:1

Q141

A dihybrid cross between two heterozygotes ($RrYy \times RrYy$) gives a phenotypic ratio of:

(a) 3:1

(b) 1:2:1

(c) 9:3:3:1

(d) 1:1:1:1

Q142

A colour-blind man marries a woman homozygous normal for vision. The probability of their sons being colour-blind is:

(a) 0%

(b) 25%

(c) 50%

(d) 100%

Q143

In a pedigree, an unaffected couple has an affected daughter. The trait is most likely:

(a) Autosomal dominant

(b) Autosomal recessive

(c) X-linked dominant

(d) Y-linked

Q144

A glomerular filtration rate (GFR) of a healthy individual is approximately:

(a) 80 mL/min

(b) 125 mL/min

(c) 180 L/day equivalent to 125 mL/min

(d) Both b and c

Q145

If 180 L of filtrate is formed daily but only 1.5 L of urine is excreted, the percentage of filtrate reabsorbed is approximately:

(a) 75%

(b) 85%

(c) 99%

(d) Almost 100%

Q146

Which contraceptive method has the lowest failure rate among reversible methods?

(a) Condom

(b) Diaphragm

(c) IUDs (Cu-T, LNG-20)

(d) Rhythm method

Q147

Which of the following is a barrier method of contraception?

(a) Cu-T

(b) Mala-D

(c) Condom

(d) Saheli

Q148

Saheli, a non-steroidal contraceptive pill developed by CDRI, is taken:

(a) Daily

(b) Weekly

(c) Monthly

(d) After coitus only

Q149

If allele frequency of a recessive trait is $q = 0.1$, the frequency of homozygous recessive individuals (q^2) in Hardy-Weinberg equilibrium is:

(a) 0.01

(b) 0.1

(c) 0.18

(d) 0.81

Q150

If $p = 0.6$ and $q = 0.4$ in a population, the frequency of heterozygotes ($2pq$) is:

(a) 0.24

(b) 0.36

(c) 0.48

(d) 0.16

Q151

Darwin's finches on the Galapagos islands evolved different beak shapes due to:

(a) Convergent evolution

(b) Adaptive radiation

(c) Parallel evolution

(d) Coevolution

Q152

A patient cannot digest fats efficiently. The most likely cause is:

(a) Lack of pepsin

(b) Lack of bile salts

(c) Lack of amylase

(d) Lack of HCl

Q153

Calculate the BMR contribution if a 70 kg adult uses 2 kcal/kg/hr at rest. Daily basal energy expenditure $\approx$

(a) 1680 kcal

(b) 2400 kcal

(c) 3360 kcal

(d) 1200 kcal

Q154

ECG of a patient shows a prolonged Q-T interval. This indicates abnormality in:

(a) Atrial depolarisation

(b) Ventricular depolarisation only

(c) Total ventricular depolarisation and repolarisation time

(d) SA node firing

Q155

If a person has a vital capacity of 4500 mL and tidal volume of 500 mL, the sum of IRV + ERV equals:

(a) 3500 mL

(b) 4000 mL

(c) 4500 mL

(d) 5000 mL

Q156

In humans, the diaphysis (shaft) of long bones is composed mainly of:

(a) Spongy bone

(b) Compact bone

(c) Hyaline cartilage

(d) Fibrous cartilage

Q157

Calculation: if I-band is 2 μm at rest and shortens to 1 μm during contraction, the sarcomere has shortened by:

(a) 0.5 μm at each end

(b) 1 μm at each end

(c) 0.25 μm at each end

(d) No change

Q158

Joints between phalanges are:

(a) Ball and socket

(b) Pivot

(c) Hinge

(d) Saddle

Q159

Which of the following gives rise to insulin produced by recombinant DNA technology?

(a) E. coli with human insulin gene

(b) Pancreas of pig

(c) Yeast with bovine gene

(d) Cow pancreatic extract

Q160

Bt cotton is resistant to:

(a) Fungal infection

(b) Bollworm (Lepidopteran) attack

(c) Drought

(d) Herbicides

Q161

Gene therapy was first attempted in 1990 on a 4-year-old girl with:

(a) Sickle-cell anaemia

(b) ADA deficiency (SCID)

(c) Cystic fibrosis

(d) Haemophilia

Q162

AIDS is diagnosed by which test?

(a) Widal test

(b) ELISA

(c) MRI

(d) PCR for HBV

Q163

Cocaine is obtained from:

(a) Cannabis sativa

(b) Erythroxylum coca

(c) Papaver somniferum

(d) Atropa belladonna

Q164

Antibodies (IgG) are made up of:

(a) 2 heavy + 2 light chains

(b) 4 heavy chains

(c) 1 heavy + 3 light chains

(d) Only light chains

Q165

Pneumonia in humans is caused by:

(a) Streptococcus pneumoniae and Haemophilus influenzae

(b) Salmonella typhi

(c) Plasmodium vivax

(d) Wuchereria bancrofti

Q166

In Periplaneta, the gizzard (proventriculus) is involved in:

(a) Absorption of digested food

(b) Grinding of food

(c) Storage of food

(d) Excretion

Q167

Number of ovarioles in each ovary of female cockroach is:

(a) 6

(b) 8

(c) 10

(d) 16

Q168

Which animal has water-vascular system?

(a) Annelida

(b) Mollusca

(c) Echinodermata

(d) Arthropoda

Q169

Which class of vertebrates has 3-chambered heart with incompletely divided ventricle?

(a) Pisces

(b) Amphibia

(c) Reptilia (except crocodile)

(d) Aves

Q170

Areolar tissue is a type of:

(a) Dense connective tissue

(b) Loose connective tissue

(c) Specialised connective tissue

(d) Epithelial tissue

Q171

Cardiac muscles are:

(a) Striated, voluntary, uninucleate

(b) Striated, involuntary, branched, uninucleate

(c) Non-striated, involuntary, spindle-shaped

(d) Striated, voluntary, multinucleate

Q172

Hyperthyroidism causes:

(a) Goitre and weight gain

(b) Exophthalmic goitre (Graves' disease) with weight loss

(c) Cretinism

(d) Diabetes insipidus

Q173

Diabetes insipidus is caused by deficiency of:

(a) Insulin

(b) ADH (vasopressin)

(c) Glucagon

(d) Aldosterone

Q174

An action potential at axon hillock is initiated when membrane potential reaches:

(a) +30 mV

(b) -70 mV resting

(c) Threshold ~ -55 mV

(d) 0 mV

Q175

Number of mitotic divisions required to produce 128 cells from one cell is:

(a) 6

(b) 7

(c) 8

(d) 128

Q176

From one primary spermatocyte, the number of functional sperms produced after meiosis is:

(a) 1

(b) 2

(c) 4

(d) 8

Q177

Crossing over takes place at what stage of meiosis I?

(a) Leptotene

(b) Zygotene

(c) Pachytene

(d) Diplotene

Q178

Population growth equation $dN/dt = rN(K-N)/K$ describes:

(a) Exponential growth

(b) Logistic growth

(c) Geometric growth

(d) Constant population

Q179

The coenzyme NAD contains the vitamin:

(a) Riboflavin (B2)

(b) Niacin (B3)

(c) Thiamine (B1)

(d) Pyridoxine (B6)

Q180

A man heterozygous for haemophilia gene is impossible because:

(a) Haemophilia is autosomal

(b) The gene is on Y chromosome

(c) Haemophilia is X-linked recessive and males are hemizygous

(d) Females cannot carry it

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NEET UG 2026 Prediction Paper — Set 3

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Pattern: 180 Qs / 720 marks / 3 hours / All compulsory (NTA 2026 Information Bulletin)

Syllabus: NMC rationalised NCERT 2025 (unchanged for 2026)

Companion sets: **Set 2**



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