



TECHNO INDIA GROUP OF PUBLIC SCHOOLS

Dt. 10-11-2025

NEET (XI) Monthly Mock Test - 5 (November-2025)

Time Allowed: **3 hours**

Maximum Marks: **720**

General Instructions:

1. This test will be a 3 hours Test, Maximum Marks 720.
2. This test consists of 180 questions of Physics, Chemistry and Biology. All questions are **COMPULSORY** to attempt.
3. Each question is of 4 marks.
4. There are three parts in the question paper, consisting Part-I Physics (Q. No. 1 to 45), Part-II Chemistry (Q. no. 46 to 90), Part-III Biology (Q. no. 91 to 180).
5. There will be only one correct choice in the given four choices for each question. For each question 4 marks will be awarded for correct choice, 1 mark will be deducted for incorrect choice and zero mark will be awarded for attempted question.
6. Any textual, printed or written material, mobile phones, calculator, etc. is not allowed for the students appearing for the test.
7. All calculations / written work should be done in the rough sheet provided.

Space For Rough Works



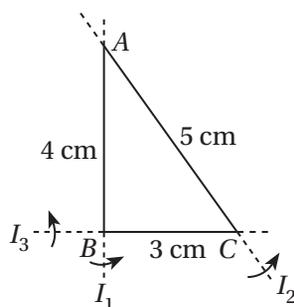
PHYSICS

1. Convert 1 MW power on a new system having basis unit of mass, length and time as 10 kg, 1 cm and 1 min, respectively
 ① 2.16×10^{10} unit ② 2.16×10^{11} unit ③ 2.16×10^{12} unit ④ 2.16×10^{13} unit
2. The direction of vector \vec{A} is reversed. What are the values of $\Delta\vec{A}$ and $\Delta|\vec{A}|$?
 ① $+2\vec{A}, 0$ ② $+\vec{A}, 0$ ③ $-2\vec{A}, 0$ ④ $-\vec{A}, 0$
3. A car moving with a velocity of 10 m/s can be stopped by the application of a constant force F in a distance of 20 m. If the velocity of the car is 30 m/s, it can be stopped by this force in
 ① 100 m ② 120 m ③ 180 m ④ 160 m
4. The horizontal and vertical displacement of a projectile are given as $x = at$ and $y = bt - ct^2$. Then velocity of projectile is _____.
 ① $\sqrt{a^2 + b^2}$ ② $\sqrt{b^2 + c^2}$ ③ $\sqrt{a^2 + c^2}$ ④ $\sqrt{a^2 - c^2}$
5. A constant force (F) is applied on a stationary particle of mass M . The velocity attained by particle in certain displacement will be proportional to
 ① M ② $\frac{1}{M}$ ③ \sqrt{M} ④ $\frac{1}{\sqrt{M}}$
6. A particle is projected up 37° rough incline with velocity V . If $\mu = \frac{1}{2}$, the speed with which it returns back to the starting point is v . Then $\frac{V}{v_0}$ is _____
 ① $\frac{1}{2}$ ② $\frac{1}{\sqrt{3}}$ ③ $\frac{1}{\sqrt{5}}$ ④ $\frac{1}{\sqrt{2}}$
7. Density of a liquid 'A' is 0.5 g/cc and that of liquid 'B' is 0.6 g/cc. Heat capacity of 8 liters of 'A' is equal to that of 10 liters of 'B'. Then this specific heat ratio is—
 ① 4 : 5 ② 3 : 2 ③ 2 : 3 ④ 1 : 1
8. Two rods of same length having conductivities $60 \text{ W m}^{-1} \text{ K}^{-1}$, $40 \text{ W m}^{-1} \text{ K}^{-1}$ and areas of cross-section 0.2 m^2 , 0.3 m^2 are connected in parallel to each other. The effective conductivity of the combination is
 ① $50 \text{ W m}^{-1} \text{ K}^{-1}$ ② $45 \text{ W m}^{-1} \text{ K}^{-1}$ ③ $52 \text{ W m}^{-1} \text{ K}^{-1}$ ④ $48 \text{ W m}^{-1} \text{ K}^{-1}$
9. The volume of air increased by 5% in its adiabatic expansion. The percentage decreases in its pressure will be ($\gamma = 1.4$)
 ① 5% ② 6% ③ 7% ④ 8%
10. When an ideal gas ($\gamma = 5/3$) is heated under constant pressure, then what percentage of given heat energy will be utilised in doing external work.
 ① 40% ② 30% ③ 60% ④ 20%
11. The ratio of radii of gyration of a circular disc and a circular ring of the same radii and mass about a tangential axis perpendicular to plane of disc or ring is
 ① 1 : 2 ② $\sqrt{5} : \sqrt{6}$ ③ $2 : \sqrt{3}$ ④ $\sqrt{3} : 2$
12. A mass M is moving with a constant velocity parallel the x -axis. Its angular momentum w.r.t. origin
 ① is zero ② remains constant ③ goes on increasing ④ goes on decreasing

13. A fly wheel rotates with a uniform angular acceleration. Its angular velocity increases from $20\pi \text{ rad s}^{-1}$ to $40\pi \text{ rad s}^{-1}$ in 10 s. How many rotations did it make in this period?

- ① 80 ② 100 ③ 120 ④ 150

14. For the adjoining diagram, ABC is a triangular lamina. The correct relation between I_1 , I_2 and I_3 is (I = moment of inertia)



- ① $I_1 > I_2 > I_3$ ② $I_2 > I_1 > I_3$ ③ $I_2 > I_1 > I_3$ ④ $I_3 > I_2 > I_1$

15. A particle of mass M is situated at the centre of a spherical shell having mass M and radius a . The gravitational potential at a point situated at $\frac{a}{2}$ distance from the centre, will be

- ① $\frac{3GM}{a}$ ② $-\frac{2GM}{a}$ ③ $-\frac{GM}{a}$ ④ $-\frac{3GM}{a}$

16. A wire of length L and radius r is clamped at one end. On stretching the other end of the wire with a force F , the increase in its length is l . If another wire of same material but of length $2L$ and radius $2r$ is stretched with a force $2F$, the increase in its length will be

- ① $\frac{l}{4}$ ② $\frac{l}{2}$ ③ l ④ l

17. The maximum load a wire can withstand without breaking, when its length is reduced to half of its original length, will

- ① be doubled ② be half ③ be four times ④ remains same

18. For a satellite moving in an orbit around the earth, the ratio of kinetic energy to magnitude of potential energy is

- ① $\frac{1}{\sqrt{2}}$ ② 2 ③ $\sqrt{3}$ ④ $\frac{1}{2}$

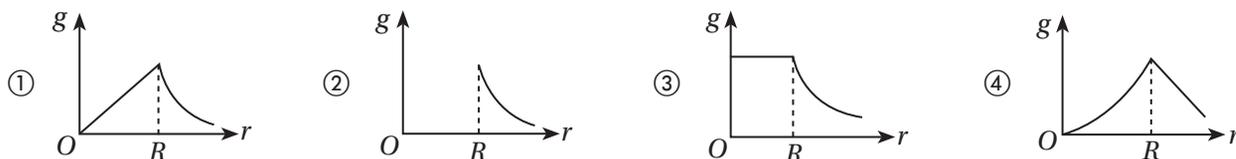
19. Which of the following is not the property of an ideal fluid?

- ① Fluid is incompressible ② Fluid is viscous
③ Fluid flow is irrotational ④ Fluid flow is streamline

20. The level of water in a tank is 5 m high. A hole of area 10 cm^2 is made in the bottom of the tank. The rate of leakage of water from the hole is ($g = 10 \text{ m/s}^2$)

- ① $10^{-2} \text{ m}^3 \text{ s}^{-1}$ ② $10^{-3} \text{ m}^3 \text{ s}^{-1}$ ③ $10^{-4} \text{ m}^3 \text{ s}^{-1}$ ④ $10^3 \text{ m}^3 \text{ s}^{-1}$

21. Which of the following graph represents the variations of acceleration due to gravity (g) with distance r from the centre of earth?



22. Two satellites of earth S_1 and S_2 are moving in the same orbit. The mass of S_1 is 4 times the mass of S_2 . Which one of the following statements is true?

- ① The potential energies of earth and satellite in the two cases are equal
- ② S_1 and S_2 are moving with the same speed
- ③ The kinetic energies of the two satellites are equal
- ④ The time period of S_1 is 4 times that of S_2

23. Match the Column I and Column II

Column—I

Column—II

- | | |
|-------------------------|---------------------------|
| (A) Floating bodies | (p) Torricelli's law |
| (B) Hydrostatic paradox | (q) Bernoulli's principle |
| (C) Energy conservation | (r) Archimedes' principle |
| (D) Speed of efflux | (s) Pascal's law |

① $A \rightarrow s, B \rightarrow q, C \rightarrow r, D \rightarrow p$

② $A \rightarrow r, B \rightarrow s, C \rightarrow q, D \rightarrow p$

③ $A \rightarrow q, B \rightarrow p, C \rightarrow s, D \rightarrow r$

④ $A \rightarrow s, B \rightarrow r, C \rightarrow q, D \rightarrow p$

24. A uniform thin bar of mass $6m$ and length $12L$ bent to make a regular hexagon. Its moment of inertia about an axis passing through the centre of mass and perpendicular to the plane of hexagon is

- ① $20 mL^2$
- ② $6 mL^2$
- ③ $\frac{12}{5} mL^2$
- ④ $30 mL^2$

25. At what height h above the earth's surface the value of g becomes $\frac{g}{2}$? [g = gravitational acceleration at the surface of the earth, R = radius of the earth]

- ① $(\sqrt{2} - 1)R$
- ② $\sqrt{2}R$
- ③ $(\sqrt{2} + 1)R$
- ④ $2R$

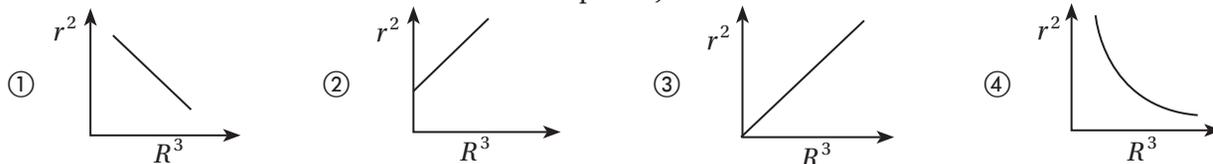
26. A rectangular film of liquid is extended from $(4 \text{ cm} \times 2 \text{ cm})$ to $(5 \text{ cm} \times 4 \text{ cm})$. If the work done is $3 \times 10 \text{ J}$, the value of the surface tension of the liquid is

- ① 0.250 N m^{-1}
- ② 0.125 N m^{-1}
- ③ 0.2 N m^{-1}
- ④ 8.0 N m^{-1}

27. A water barrel having water upto a depth d is placed on a table of height h . A small hole is made on the wall of the barrel at its bottom. If the stream of water coming out of the hole falls on the ground at a horizontal distance R from the barrel, then the value of d is

- ① $\frac{4h}{R^2}$
- ② $4hR^2$
- ③ $\frac{R^2}{4h}$
- ④ $\frac{h}{4R^2}$

28. Which of the following graphs represents the motion of a planet moving about the sun? (T = Time period, R = Distance between the centres of the sun and planet)



29. The escape velocity from the earth's surface is 11 km/s . The escape velocity from a planet having twice the radius and same mean density as that of earth is

- ① 5.5 km/s
- ② 11 km/s
- ③ 22 km/s
- ④ None of these

30. A small spherical ball falling through a viscous medium of negligible density has terminal velocity v . Another ball of the same mass but of radius twice that of earlier falling through the same viscous medium will have terminal velocity

- ① v ② $\frac{v}{4}$ ③ $\frac{v}{2}$ ④ None

31. When a force is applied on a wire of uniform cross-sectional area $3 \times 10^{-6} \text{ m}^2$ and length 4 m, the increase in length is 1 mm. Energy stored in it will be ($Y = 2 \times 10^{11} \text{ N/m}^2$)

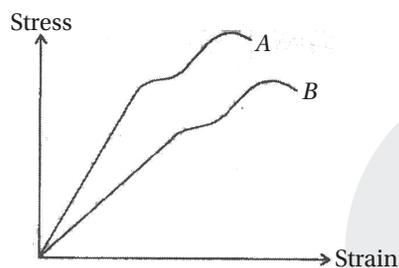
- ① 6250 J ② 0.177 J ③ 0.075 J ④ 0.150 J

32. The bulk modulus of a spherical object is 'B'. If it is subjected to uniform pressure 'p' the fractional decrease in radius is

- ① $\frac{B}{3p}$ ② $\frac{3p}{B}$ ③ $\frac{p}{3B}$ ④ $\frac{p}{B}$

33. These questions consists of two statements, each printed as Assertion (A) and Reason (R).

Assertion (A): The stress-strain graphs for two materials A and B are shown in figure. Young's modulus of A is greater than that of B.

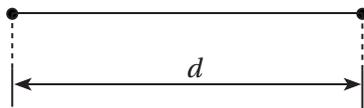


Reason (R): The Young's modulus for small strain is,

$$Y = \frac{\text{stress}}{\text{strain}} = \text{slope of linear portion of stress - strain graph}$$

- ① (A) is correct, (R) is correct; (R) is a correct explanation for (A)
 ② (A) is correct, (R) is correct; (R) is not a correct explanation for (A)
 ③ (A) is correct, (R) is incorrect
 ④ (A) is incorrect, (R) is correct

34. Two particles each of mass m are kept at a separation d . Under the action of their mutual gravitational attraction, the particles are rotating in a circular path about the centre of mass of the system. Then the speed of each particle



- ① $\sqrt{\frac{Gm}{2d}}$ ② $\sqrt{\frac{Gm}{d}}$ ③ $\sqrt{\frac{2Gm}{d}}$ ④ $\sqrt{\frac{Gm}{4d}}$

35. If 100 N force acts on a surface of area 25 m^2 making an angle 30° with the surface, the pressure exerted on the surface is

- ① 1 Pa ② 2 Pa ③ 3 Pa ④ 4 Pa

36. N division on a main scale of a vernier callipers coincides with $(N + 1)$ divisions on its vernier scale. If each division of main scale is of 'a' unit, then the least count of vernier callipers is

- ① $\frac{a}{N}$ ② $\frac{a}{N+1}$ ③ $\frac{a}{N-1}$ ④ none

CHEMISTRY

46. If the equilibrium constant for $\text{N}_2(\text{g}) + \text{O}_2(\text{g}) \rightleftharpoons 2\text{NO}(\text{g})$ is K , the equilibrium constant for $\frac{1}{2}\text{N}_2(\text{g}) + \frac{1}{2}\text{O}_2(\text{g}) \rightleftharpoons \text{NO}(\text{g})$ will be:
- ① $K^{\frac{1}{2}}$ ② $\frac{1}{2}K$ ③ K ④ K^2
47. $3\text{O}_2(\text{g}) \rightleftharpoons 2\text{O}_3(\text{g})$; For the above reaction at 298K, K_c is found to be 3×10^{-5} . If the concentration of O_2 at equilibrium is 0.04(N) then the concentration of O_3 in M is:
- ① 1.9×10^{-63} ② 2.4×10^{31} ③ 1.2×10^{21} ④ 4.38×10^{-32}
48. 0.126 g of an acid required 20 ml of 0.1N NaOH for complete neutralisation. Equivalent weight of acid is:
- ① 45 ② 53 ③ 40 ④ 63
49. Assuming fully decomposed, the volume of CO_2 released at S.T.P on heating 9.85 BaCO_3 , will be (Atomic weight of Ba = 137):
- ① 1.12 L ② 0.84 L ③ 2.24 L ④ 4.06 L
50. Mole fraction of a given sample of I_2 in C_6H_6 (M.W = 78) is 0.2. The molality of I_2 in C_6H_6 will be:
- ① 0.16 ② 0.32 ③ 1.6 ④ 3.2
51. 200 ml 0.1 (N) NaOH solution is added to 50 ml 0.01 (N) KOH solution. What is the final concentration in normality of the mixture solution?
- ① 0.062 N ② 0.072 N ③ 0.082 N ④ 0.092 N
52. What is the concentration when 3.6 g $\text{C}_6\text{H}_{12}\text{O}_6$ (M.W = 180) is dissolved in 200 gm water?
- ① 0.1 m ② 0.01 m ③ 0.2 m ④ 0.002 m
53. The normality of solution obtained by mixing 100 ml of 0.2 (M) H_2SO_4 , with 100 ml of 0.2 M NaOH is:
- ① 0.1 ② 0.2 ③ 0.5 ④ 0.3
54. A piece of Mg is dissolved in 40 ml of $\frac{N}{10}$ HCl completely. The excess of acid was neutralized by 15 ml of $\frac{N}{5}$ NaOH. The weight of Mg is:
- ① 0.24 g ② 0.024 g ③ 0.012 g ④ 0.40 g
55. The mole fraction of glucose in aqueous solution is 0.2, then molality of solution will be
- ① 13.8 ② 55.56 ③ 2 ④ 12
56. Compressibility factor (Z) for an ideal gas is:
- ① 1.5 ② 1.0 ③ 2.0 ④ ∞
57. Total numbers of geometrical isomers are possible for:
- $\text{H}_3\text{C} - \text{CH} = \text{CH} - \text{CH} = \text{CH} - \text{CH} = \text{CH} - \text{CH} = \text{CH} - \text{C}_2\text{H}_5$
- ① 4 ② 6 ③ 8 ④ 16
58. Total numbers of geometrical isomers of the following compound are possible for:
- $\text{Cl} - \text{CH} = \text{CH} - \text{CH} = \text{CH} - \text{CH} = \text{CH} - \text{Cl}$
- ① 2 ② 4 ③ 6 ④ 12
59. Find the possible structural isomers of C_4H_8 :
- ① 2 ② 4 ③ 5 ④ 6

Assertion-Reason Questions (Q.15-Q.20):

- (A) Both (A) and (R) are correct and (R) is the correct explanation of (A)
 (B) Both (A) and (R) are correct but (R) is not the correct explanation of (A)
 (C) (A) is correct but (R) is not correct
 (D) (A) is not correct but (R) is correct

60. **Assertion:** The angular momentum of d-orbitals is $\frac{\sqrt{6h}}{2\pi}$

Reason: Angular momentum of electron in orbit is $mvr = \frac{nh}{2\pi}$.

- ① A ② B ③ C ④ D

61. **Assertion:** Line emission spectra useful in the study of electronic configuration line.

Reason: Each element has a unique emission spectrum.

- ① A ② B ③ C ④ D

62. **Assertion:** Entropy change in reversible adiabatic expansion of an ideal gas is zero.

Reason: The increase in entropy due to volume increase just compensates the decrease in entropy due to fall in temperature.

- ① A ② B ③ C ④ D

63. **Assertion:** All combustion reactions are exothermic reactions.

Reason: Enthalpies of products are greater than enthalpies of reactants: $(\sum V_P \Delta H_f^{\text{CP}}) > \sum V_R \Delta H_f^{\text{CR}}$

- ① A ② B ③ C ④ D

64. **Assertion:** pH of 10^{-7} (M) HCl is less than 7 at 25°C.

Reason: At very low concentration of HCl contribution of H^+ from water is considerable.

- ① A ② B ③ C ④ D

65. **Assertion:** Polarisation is the distortion of the shape of an anion by an adjacent placed cation.

Reason: Maximum polarisation is brought about by a cation of high charge.

- ① A ② B ③ C ④ D

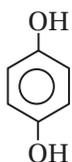
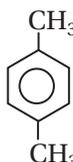
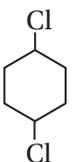
66. Which of the given compounds is planar?

- ① XeF_5^{\ominus} ② XeF_4 ③ ICl_4^{\ominus} ④ All of these

67. d_z^2 orbitals take part in hybridisation:

- ① dsp^3 ② sp^3d^2 ③ d^2sp^3 ④ All of these

68. Which of the following compounds have zero dipole moment?

- ①  ②  ③  ④ All of these

69. LiF is insoluble in water due to

- ① Low hydration energy ② High hydration energy ③ Low lattice energy ④ High lattice energy

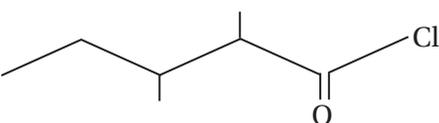
70. Which of the following species is paramagnetic?

- ① O_2^{2-} ② NO ③ CO ④ CN^-

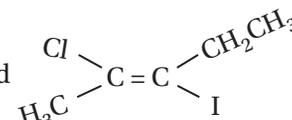
71. Which one of the following is planar ?
 ① XeF₄ ② XeO₄ ③ XeO₃F ④ XeO₃F₂
72. Which of the following bonds will be most polar ?
 ① N - Cl ② O - F ③ N - F ④ N - N
73. Identify the correct answer
 ① Three resonance structures can be drawn for ozone.
 ② BF₃ has non-zero dipole moment
 ③ Dipole moment of NF₃ is greater than that of NH₃.
 ④ Three canonical forms can be drawn for CO₃²⁻
74. Which one of the following pairs of species have the same bond order?
 ① CO, NO ② O₂ NO⁺ ③ CN[⊖], CO ④ N₂, O₂⁻
75. Strongest hydrogen bonding is shown by :
 ① H₂O ② NH₃ ③ HF ④ H₂S
76. Which one shows maximum hydrogen bonding ?
 ① H₂O ② H₂Se ③ H₂S ④ HF
77. The weakest among the following type of bond is :
 ① ionic ② covalent ③ metallic ④ H-bond
78. Which of the following does not apply to metallic bond ?
 ① overlapping valence orbitals ② mobile valence electrons
 ③ Delocalised electrons ④ Highly directed bonds
79. The entropy values [in JK⁻¹ (mole⁻¹) of H₂(g) = 130.6, Cl₂(g) = 2230 and HCl(g) = 186.7 at 298k and 1 atm pressure, then entropy change for the reaction :
 H₂(g) + Cl₂(g) → 2HCl(g) is :
 ① + 540.3 ② + 727.3 ③ - 166.9 ④ + 19.8
80. Equivalent weight of KMnO₄ in basic medium (If M.W of KMnO₄ = M) is :
 ① $\frac{M}{5}$ ② $\frac{M}{3}$ ③ $\frac{M}{4}$ ④ $\frac{M}{1}$
81. Calculate the n-factor of underlined reactants :
 $\text{Cl}^2 + \text{OH}^\ominus \longrightarrow \text{Cl}^\ominus + \text{ClO}_3^\ominus + \text{H}_2\text{O}$
 ① 3 ② $\frac{3}{5}$ ③ $\frac{5}{3}$ ④ 5
82. Equivalent weight of Mohr's salt in the titration with KMnO₄ is [M = Molecular weight]
 ① $\frac{M}{1}$ ② $\frac{M}{4}$ ③ $\frac{M}{3}$ ④ $\frac{M}{2}$
83. the number of moles of KMnO₄ that will be needed to react completely with one mole of ferrous oxalate in acidic solution is :
 ① $\frac{3}{5}$ ② $\frac{2}{5}$ ③ $\frac{4}{5}$ ④ $\frac{1}{5}$

84. The energy required to break 76g gaseous fluorine into free gaseous atoms is 180 Kcal at 25°C. The bond energy of F-F bond will be :

- ① 180 Kcal ② 90 Kcal ③ 45 Kcal ④ 104 Kcal

85. The IUPAC name of  is

- ① 3,4 - dimethyl pentanoyl chloride ② 1 - chloro-1-ono - 2,3 dimethyl pentane
③ 2 - ethyl - 3 methyl butanoyl chloride ④ 2,3 - dimethyl pentanoyl chloride

86. IUPAC name of the compound  is

- ① trans - 3 - iodo - 4 - chloro - 3 - pentene ② Cis - 2 - chloro - 3 - iodo - 2 - pentene
③ trans - 2 - chloro - 3 - iodo - 2 - pentene ④ cis - 3 - iodo - 4 chloro - 3 - pentene

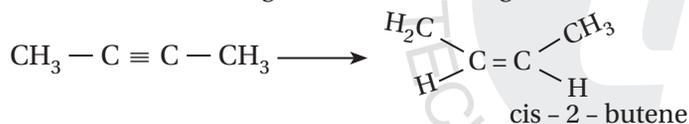
87. The reaction of ethyl magnesium bromide with water would give

- ① ethane ② ethyl alcohol ③ ethyl bromide ④ ethyl ether

88. Which one of the following has the shortest carbon - carbon bond length ?

- ① benzene ② ethene ③ ethyne ④ ethane

89. The most suitable reagent for the following conversion is :



- ① H_2 ; Pd/C, quinoline ② Zn/HCl ③ $\text{Hg}^{2+} / \text{H}^+, \text{H}_2\text{O}$ ④ Na / liquid NH

90. Give a chemical test to differentiate between ethane and ethyne :

- ① Baeyer's reagent ② bromine water ③ Tollen's reagent ④ All of these

Biology

91. The splitting of water during photosynthesis releases:

- ① CO_2 , H^+ and electrons ② O_2 , H^+ and electrons
③ H_2 and CO_2 ④ O_2 and ATP

92. In respiration, the link between glycolysis and Krebs cycle is:

- ① Oxaloacetate ② Acetyl CoA ③ Pyruvate ④ Citrate

93. The enzyme responsible for CO_2 fixation in C_4 plants is:

- ① Rubisco ② PEP carboxylase ③ Pyruvate kinase ④ ATP synthase

94. Which of the following hormones promotes cell elongation?

- ① Auxin ② Cytokinin ③ ABA ④ Ethylene

95. Photorespiration is favoured by:

- ① High CO_2 and low O_2 ② Low CO_2 and high O_2
③ High CO_2 and high O_2 ④ Low CO_2 and low O_2

96. The energy currency of living cells is:
 ① ATP ② NADPH ③ FADH₂ ④ ADP
97. The C₄ pathway was discovered by:
 ① Hatch and Slack ② Calvin and Benson ③ Hill and Bendall ④ Arnon
98. The respiratory quotient (RQ) of carbohydrate is:
 ① 0.7 ② 1.0 ③ >1 ④ <1
99. The site of light reaction is:
 ① Stroma ② Grana thylakoids ③ Cytoplasm ④ Outer membrane
100. Which plant hormone delays senescence?
 ① Cytokinin ② Auxin ③ ABA ④ Ethylene
101. Kranz anatomy is typical of:
 ① C₃ plants ② C₄ plants ③ CAM plants ④ Bryophytes
102. The first stable product of C₃ cycle is:
 ① OAA ② PGA ③ PEP ④ RuBP
103. The final acceptor of electrons in aerobic respiration is:
 ① Oxygen ② CO₂ ③ NAD⁺ ④ FAD
104. The term "photosynthesis" was coined by:
 ① Sachs ② Calvin ③ Ingenhousz ④ Hill
105. Oxidation of one molecule of FADH₂ results in _____ moles of ATP
 ① 1 ② 2 ③ 3 ④ 4
106. In photorespiration, which three organelles are involved?
 ① Mitochondria, chloroplast, peroxisome ② Mitochondria, nucleus, vacuole
 ③ Cytoplasm, ribosome, ER ④ None
107. Which hormone is called the "stress hormone"?
 ① Ethylene ② Abscisic acid ③ Auxin ④ Cytokinin
108. The Z-scheme represents:
 ① Electron flow in light reaction ② Calvin cycle
 ③ Photorespiration ④ Glycolysis
109. Which plant hormone induces flowering in short-day plants?
 ① Gibberellin ② ABA ③ Florigen ④ Cytokinin
110. In the Krebs cycle, one molecule of acetyl CoA produces:
 ① 3 NADH, 1 FADH₂, 1 ATP ② 2 NADH, 2 ATP
 ③ 3 ATP, 3 CO₂ ④ 1 ATP, 2 NADH
111. The site of Calvin cycle is:
 ① Stroma ② Grana ③ Thylakoid lumen ④ Mitochondria
112. The hormone responsible for seed dormancy is:
 ① Cytokinin ② ABA ③ Gibberellin ④ Auxin
113. In photosynthesis, oxygen is released from:
 ① CO₂ ② H₂O ③ Glucose ④ ATP

- 114.** In respiration, ATP synthesis is linked to:
 ① Substrate-level phosphorylation ② Oxidative phosphorylation
 ③ Both ④ None
- 115.** Which pigment is a reaction center in photosystem II?
 ① P700 ② P680 ③ P720 ④ P600
- 116.** In mitochondria, protons accumulate in
 ① Outer membrane ② Intermembrane space
 ③ Inner membrane ④ Matrix
- 117.** CAM plants open their stomata:
 ① During the day ② At night ③ Always closed ④ Randomly
- 118.** The number of ATP molecules formed from one molecule of glucose (aerobic) is approximately:
 ① 2 ② 8 ③ 36-38 ④ 12
- 119.** The function of Rubisco is:
 ① CO₂ fixation ② O₂ evolution ③ ATP synthesis ④ Proton transport
- 120.** Ethylene promotes:
 ① Fruit ripening ② Root elongation
 ③ Leaf formation ④ Chlorophyll formation
- 121.** Photorespiration occurs in:
 ① C₄ plants ② C₃ plants ③ CAM plants ④ Both C₃ and C₄
- 122.** Which of the following shows apical dominance?
 ① Removal of apical bud ② Presence of apical bud
 ③ Lateral branching ④ Root growth only
- 123.** In the Calvin cycle, CO₂ combines with:
 ① PGA ② PEP ③ RuBP ④ Glucose
- 124.** Which stage of cellular respiration produces maximum ATP?
 ① Glycolysis ② Krebs cycle ③ ETC ④ Fermentation
- 125.** Which of the following is an inhibitory hormone?
 ① Cytokinin ② Auxin ③ ABA ④ Gibberellin
- 126.** In photosynthesis, NADPH is produced during:
 ① Light reaction ② Dark reaction ③ Glycolysis ④ Calvin cycle
- 127.** The process of conversion of pyruvate into ethanol and CO₂ is called:
 ① Glycolysis ② Fermentation ③ Krebs cycle ④ Chemiosmosis
- 128.** Which of the following is a gaseous hormone?
 ① Ethylene ② Auxin ③ Cytokinin ④ Gibberellin
- 129.** Which factor does not affect photosynthesis directly?
 ① CO₂ concentration ② Light intensity ③ Water ④ Temperature
- 130.** The first stable product in C₄ pathway is:
 ① Malic acid ② Oxaloacetic acid ③ 3-PGA ④ RuBP
- 131.** In mitochondria, ATP synthesis occurs in:
 ① Matrix ② Inner membrane (cristae)
 ③ Outer membrane ④ Intermembrane space

- 132.** Vernalization refers to:
 ① Requirement of cold to induce flowering ② Requirement of light
 ③ Dormancy breaking ④ Germination under darkness
- 133.** During aerobic respiration, oxygen acts as:
 ① Electron donor ② Final electron acceptor
 ③ ATP generator ④ Proton carrier
- 134.** Light saturation point in C_3 plants is:
 ① Low ② High ③ Infinite ④ Moderate
- 135.** Which hormone breaks seed dormancy?
 ① ABA ② Gibberellin ③ Cytokinin ④ Ethylene
- 136.** The process of ATP formation using proton gradient is:
 ① Photophosphorylation ② Oxidative phosphorylation
 ③ Both ④ None
- 137.** The first stable product of respiration is:
 ① Acetyl CoA ② Pyruvate ③ Citrate ④ CO_2
- 138.** The "Hill reaction" demonstrates:
 ① CO_2 fixation ② Photolysis of water
 ③ ATP synthesis ④ Chlorophyll fluorescence
- 139.** Auxin was first isolated from:
 ① Coleoptile tips of oat seedlings ② Root tips
 ③ Leaf primordia ④ Fruit tissues
- 140.** NADH and $FADH_2$ are produced in:
 ① Glycolysis ② Krebs cycle ③ Calvin cycle ④ Light reaction
- 141.** The RQ value of fats is:
 ① 0.7 ② 1.0 ③ >1 ④ <1
- 142.** Chlorophyll-a absorbs maximum light in:
 ① Blue and red regions ② Green region
 ③ Infrared ④ Yellow region
- 143.** The C_4 plants minimize photorespiration by:
 ① Spatial separation of steps ② Temporal separation
 ③ Increased Rubisco activity ④ Reducing ATP consumption
- 144.** Which hormone induces fruit ripening?
 ① Auxin ② Ethylene ③ Gibberellin ④ Cytokinin
- 145.** The first step in anaerobic respiration is:
 ① Glycolysis ② Krebs cycle ③ Fermentation ④ ETC
- 146.** In which plant is the Calvin cycle first found?
 ① Maize ② Wheat ③ Spinach ④ Chlorella
- 147.** The number of ATP molecules produced in glycolysis (net gain):
 ① 2 ② 4 ③ 6 ④ 8
- 148.** Which hormone causes bolting in rosette plants?
 ① Gibberellin ② Auxin ③ Cytokinin ④ ABA

149. The dark reaction of photosynthesis occurs in:
 ① Stroma ② Grana ③ Cytoplasm ④ Lumen
150. Which of these is a 5-carbon sugar?
 ① Ribulose ② Glucose ③ Fructose ④ Sucrose
151. During anaerobic respiration in yeast, the end product is:
 ① Lactic acid ② Ethanol ③ Pyruvate ④ CO₂
152. The total CO₂ released in Krebs cycle per glucose molecule is:
 ① 2 ② 4 ③ 6 ④ 8
153. The plant growth curve is:
 ① Linear ② Sigmoid ③ Exponential ④ Constant
154. The reaction center of PSI is:
 ① P700 ② P680 ③ P720 ④ P600
155. The process of aerobic respiration yields how many water molecules per glucose?
 ① 4 ② 6 ③ 2 ④ 8
156. Which factor primarily limits photosynthesis under bright light?
 ① CO₂ concentration ② Temperature ③ Water ④ O₂ concentration
157. The hormone that promotes lateral bud growth is:
 ① Cytokinin ② Auxin ③ Gibberellin ④ ABA
158. Photorespiration consumes:
 ① O₂ and releases CO₂ ② CO₂ and releases O₂ ③ Both O₂ and CO₂ ④ Only ATP
159. The first stable product in photorespiration is:
 ① Glycolate ② PGA ③ OAA ④ Malate
160. The pentose phosphate pathway occurs in:
 ① Cytosol ② Mitochondria ③ Chloroplast ④ Nucleus
161. Which of the following enhances respiration rate?
 ① Increased temperature ② Decreased CO₂ ③ Low O₂ ④ Low sugar
162. The ratio of CO₂ fixed per ATP consumed in Calvin cycle is:
 ① 1:3 ② 1:2 ③ 1:1 ④ 1:4
163. The hormone discovered from *Fusarium* fungus is:
 ① Cytokinin ② Gibberellin ③ Ethylene ④ ABA
164. The photolysis of water occurs in:
 ① PSII ② PSI ③ Both ④ None
165. The enzyme ATP synthase is located in:
 ① Thylakoid membrane and mitochondrial inner membrane
 ② Cytoplasm
 ③ Nucleus
 ④ Stroma only
166. Glycolysis produces ATP by:
 ① Oxidative phosphorylation ② Substrate-level phosphorylation
 ③ Chemiosmosis ④ Photophosphorylation

