प्रा. मोटेगावकर सरांचे

RCC

NEET : 2022 | **PCB Test : 1** | **Time : 03 Hours**

Question Booklet Version	Roll Number	Question Booklet Sr. No.
11 (Write this number on your Answer Sheet)	0	

This is to certify that, the entries of RCC-2022 Roll No. and Answer Sheet No. have been correctly written and verified.

Candidate's Signature

Invigilator's Signature

NTA UPDATED QUESTION PAPER PATTERN

Sr. No.	Subject(s)	Section(s)	No. Of Question(s)	Mark(s)* *(Each Question Carries 04 (Four Marks))	Type Of Question(s)
1.	PHYSICS	SECTION A	35	140	MCQ (Multiple Choice Questions)
		SECTION B	15	40	
2.	CHEMISTRY	SECTION A	35	140	
		SECTION B	15	40	
3.	BOTONY	SECTION A	35	140	
		SECTION B	15	40	
4.	ZOOLOGY	SECTION A	35	140	
		SECTION B	15	40	
		TOTAL MARKS		720	

Note: ■ Correct option marked will be given (4) Marks and incorrect option marked will be minus one (-1) mark. Unattempted/Unonswered Questions will be given no marks.

■ Section B will have 15 questions, out of these 15 Questions, candidates can choose to attempt any10 Questions.

• *Test Syllabus* •

Physics : (11^{th} + 12^{th}) Complete Syllabus

Chemistry : (11^{th} + 12^{th}) Complete Syllabus

Biology : (11^{th} + 12^{th}) Complete Syllabus

Section 'A' : Physics

Section 'A'

1. A car is moving on a curved path with banking angle θ, the coefficient of friction between tyres of car and road is μ_s . The maximum safe velocity of car is

1) $\sqrt{gR^2\left(\frac{\mu_s+\tan\theta}{1-\mu_s\tan\theta}\right)}$ 2) $\sqrt{gR\left(\frac{\mu_s+\tan\theta}{1-\mu_s\tan\theta}\right)}$

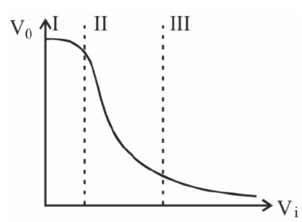
3) $\sqrt{\frac{g}{R}\left(\frac{\mu_s+\tan\theta}{1-\mu_s\tan\theta}\right)}$ 4) $\sqrt{\frac{g}{R^2}\left(\frac{\mu_s+\tan\theta}{1-\mu_s\tan\theta}\right)}$

2. The electric potential at a distance $\frac{R}{2}$ from the centre of a conducting sphere of charge Q & radius R will be

1) 0 2) $\frac{Q}{8\pi\in_0 R}$

3) $\frac{Q}{4\pi\in_0 R}$ 4) $\frac{Q}{2\pi\in_0 R}$

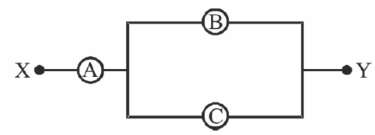
3. Transfer characteristics [(output voltage (V_0) vs input voltage (V_i)] for a base biased transistor in CE configuration is as shown in the figure.



For using transistor as a switch, it is used.

1) in region II
2) in region I
3) in region III
4) both in region (I) & (III)

4. Three voltmeter A, B and C having resistances R, $\frac{3}{2}R$ and $3R$ respectively are connected as shown in the figure. When some potential difference is applied between X and Y, the respective voltmeter readings are V_A , V_B and V_C . Then



1) $V_A \neq V_B = V_C$ 2) $V_B \neq V_A = V_C$
3) $V_A = V_B \neq V_C$ 4) $V_A = V_B = V_C$

5. A screen is placed 50 cm from a single slit, which is illuminated with 6000 Å light. If distance between the first and third minima in the diffraction pattern is 3.00 mm, what is the width of the slit?

1) 0.1 mm 2) 0.2 mm
3) 0.3 mm 4) 0.4 mm

6. Power delivered by the ac source to the circuit becomes maximum, when

1) $\omega L = \omega C$ 2) $\omega L = \frac{1}{\omega C}$

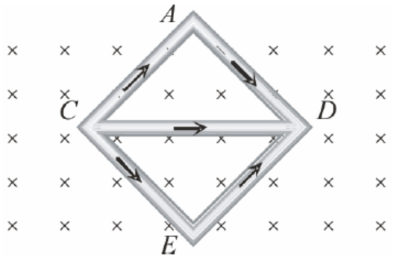
3) $\omega L = \left(\frac{1}{\omega C}\right)^2$ 4) $\omega L = \sqrt{\omega C}$

7. Focal length of a magnifying glass is 12.5 cm. Ratio of maximum and minimum magnifying power is

1) 2 : 3 2) 1 : 3
3) 3 : 1 4) 3 : 2

Space For Rough Work

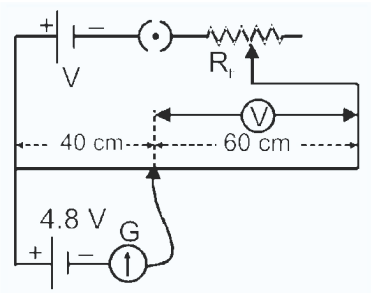
8. **Same current i = 2A is flowing in a wire frame as shown in figure. The frame is a combination of two equilateral triangles ACD and CDE of side 1m. It is placed in uniform magnetic field B = 4T acting perpendicular to the plane of frame. The magnitude of magnetic force acting on the frame is**



1) 24 N
2) Zero
3) 16 N
4) 8 N

9. **Avalanche breakdown in a PN junction diode is due to**
1) Sudden shift to Fermi level
2) Increase in the width of forbidden gap
3) Sudden increase of impurity concentration
4) Cumulative effect of increased electron collision and creation of added electron hole pairs

10. **In the following circuit, the reading of the voltmeter will be (in volts)**

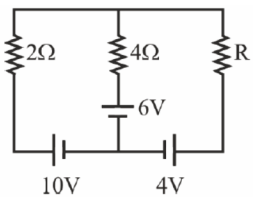


1) 7.2
2) 4.8
3) 6
4) 4

11. **Two identical metal plates show photoelectric effect by a light of wavelength λ_A falling on plate A and λ_B on plate B ($\lambda_A = 2\lambda_B$). The maximum kinetic energy is**
1) $2K_A = K_B$
2) $K_A < K_B/2$
3) $K_A = 2K_B$
4) $K_A > K_B/2$

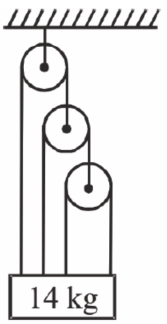
12. **The half-life of a sample of a radioactive substance is 1 hour. If 8×10^{10} atoms are present at t = 0, then the number of atoms decayed in the duration t = 2 hour to t = 4 hour will be**
1) 2×10^{10}
2) 1.5×10^{10}
3) zero
4) Infinity

13. **For what value of R in the circuit as shown current passing through 4 Ω resistance will be zero**



1) 1 Ω
2) 2 Ω
3) 3 Ω
4) 4 Ω

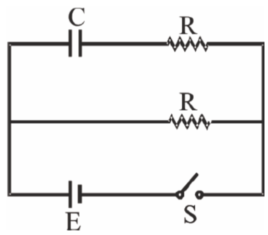
14. **A 14 kg block is hanged using a system of pulleys as shown in figure. Tension in string connecting celling and topmost pulley is**



1) 17.5 N
2) 70 N
3) 140 N
4) 280 N

Space For Rough Work

15. **In the circuit shown, when the switch is closed, the capacitor is charged with time constant τ_1 and when switch is open, then capacitor discharge with time constant τ_2 then τ_1 / τ_2 is**



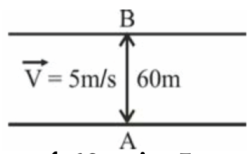
1) 1 2) 1/2
3) 2 4) 1/4

16. **A solid cylinder of mass M and radius R rolls down an inclined plane of height h. The angular velocity of the cylinder when it reaches the bottom of the plane is**

1) $\frac{1}{R}\sqrt{\frac{gh}{2}}$ 2) $\frac{2}{R}\sqrt{\frac{gh}{3}}$

3) $\frac{1}{R}\sqrt{\frac{2gh}{3}}$ 4) $\frac{3}{R}\sqrt{\frac{2gh}{2}}$

17. **A man is crossing a river flowing with velocity of 5 m/s. He reaches at points B directly across at a distance of 60m in 5 sec. His velocity in still water should be**



1) 12 m/s 2) 13 m/s
3) 5 m/s 4) 10 m/s

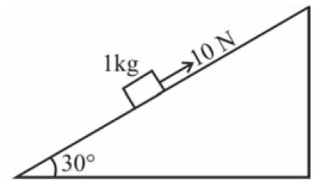
18. **If the density of the earth is doubled keeping its radius constant, then acceleration due to gravity will be (g = 9.8 m/sec^2)**

1) 19.6 m/s^2 2) 9.8 m/s^2
3) 4.9 m/s^2 4) 2.45 m/s^2

19. **Mars has a diameter of approximately 0.5 of that of earth and mass of 0.1 of that of earth. The surface gravitational field strength on mars as compared to that on earth is greater by a factor of**

1) 0.1 2) 0.2 3) 2.0 4) 0.4

20. **A block of mass 1 kg is pushed up a surface inclined to horizontal at an angle of 30° by a force of 10 N parallel to the inclined surface as shown in the figure. The coefficient of friction between block and the incline is 0.1. If the block is pushed up by 10 m along the inclined, the work done against force of friction is**

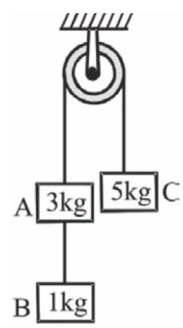


1) 8.7 J 2) 10.7 J
3) 7.8 J 4) 12.7 J

21. **A particle is moving with the velocity $v = (4t^3 + 3t^2 - 1)$ m/s. The displacement of particle in time t = 1 sec to t = 2sec will be**

1) 21 m 2) 17 m
3) 13 m 4) 9 m

22. **In the adjoining figure, the tension in the string connecting A and B is**



1) g 2) $\frac{g}{9}$ 3) $\frac{8g}{9}$ 4) $\frac{10g}{9}$

Space For Rough Work

23. If a body is executing simple harmonic motion, then

1) at extreme position, the total energy must be zero
2) at equilibrium position, the total energy is in the form of only potential energy
3) at equilibrium position, the total energy is in the form of only kinetic energy
4) at extreme position, the total energy is only potential energy

24. The angle between two vectors given by $6\hat{i}+6\hat{j}-3\hat{k}$ and $7\hat{i}+4\hat{j}+4\hat{k}$ is

1) $\cos^{-1}\left(\frac{1}{\sqrt{3}}\right)$ 2) $\cos^{-1}\left(\frac{5}{\sqrt{3}}\right)$
3) $\sin^{-1}\left(\frac{2}{\sqrt{3}}\right)$ 4) $\sin^{-1}\left(\frac{\sqrt{5}}{3}\right)$

25. We have two spheres one of which is hollow and the other solid. They have identical masses and moment of inertia about their respectively diameters. The ratio of their radius is given by

1) 5 : 7 2) 3 : 5
3) $\sqrt{3}:\sqrt{5}$ 4) $\sqrt{3}:\sqrt{7}$

26. If $a = 8 \pm 0.08$ and $b = 6 \pm 0.06$, Let $x = a + b$, $y = a - b$, $z = a \times b$. The correct order of % error in x,y and z

1) $x = y < z$ 2) $x = y > z$
3) $x < z < y$ 4) $x > z < y$

27. A mass of 100 gm is tied to one end of a string 2 m long. The body is revolving in a horizontal circle making a maximum of 200 revolutions per min. The other end of the string is fixed at the centre of the circle of revolution. The maximum tension that the string can bear is (approximately)

1) 8.76 N 2) 8.94 N
3) 87.6 N 4) 896 N

28. On heating one end of a rod, the temperature of whole rod will be uniform when

1) K = 1 2) K = 0
3) K = 100 4) $K = \infty$

29. Energy levels A, B and C of a certain atom correspond to increasing values of energy i.e. $E_A < E_B < E_C$. If λ_1 , λ_2 and λ_3 are wave lengths of radiations corresponding to transitions C to B, B to A and C to A respectively, which of the following relations is correct

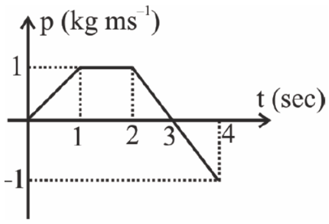
1) $\lambda_3 = \lambda_1 + \lambda_2$ 2) $\lambda_1 + \lambda_2 + \lambda_3 = 0$
3) $\lambda_3^2 = \lambda_1^2 + \lambda_2^2$ 4) $\lambda_3 = \frac{\lambda_1\lambda_2}{\lambda_1+\lambda_2}$

30. A uniform electric field of 20 N/C exists along the positive x–axis in space. The potential difference ($V_B - V_A$) for the points A (4m, 2m) and B (6m, 5m) is

1) $20\sqrt{13}$ volt 2) – 40 volt
3) + 40 V 4) $-20\sqrt{13}$ volt

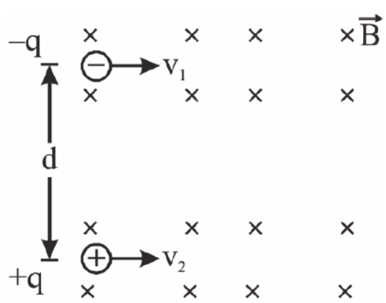
Space For Rough Work

31. Force at t = 3 sec is equal to



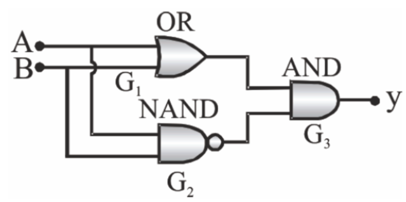
1) 1 N
2) –1 N
3) Zero
4) 3 N

32. Two identical particles having the same mass m and charges $+q$ and $-q$ separated by a distance d enter in a uniform magnetic field B directed perpendicular to paper inwards with speeds v_1 and v_2 as shown in figure. The particle will not collide if



1) $d > \frac{m}{Bq}(v_1 + v_2)$
2) $d < \frac{m}{Bq}(v_1 + v_2)$
3) $d > \frac{2m}{Bq}(v_1 + v_2)$
4) $v_1 = v_2$

33. The following configuration of gate is equivalent to



1) NAND
2) XOR
3) OR
4) None of these

34. Two whistles A and B produce notes of frequencies 660 Hz and 596 Hz respectively. There is a listener at the mid-point of the line joining them. Both the whistle B and the listener start moving with speed 30 m/s away from whistle A. If speed of sound be 330 m/s, how many beats will be heard by the listener?

1) 2
2) 4
3) 6
4) 8

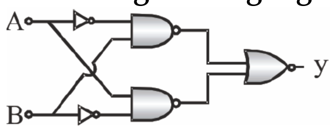
35. Which is the correct statement

1) For an isothermal change PV = constant
2) In an isothermal process the change in internal energy must be equal to the work done
3) For an adiabatic change $\frac{P_2}{P_1} = \left(\frac{V_2}{V_1}\right)^{\gamma}$, where λ is the ratio of specific heats
4) In an adiabatic process work done must be equal to the heat entering the system

Space For Rough Work

Section 'B'

36. Output Y of the given logic gate network is



1) $\overline{A}.B = A.\overline{B}$
2) $A.B = \overline{A}.\overline{B}$
3) $\overline{(A+B)} = \overline{A}\,.\,\overline{B}$
4) None

37. A 50-turn circular coil of radius 2.0 cm carrying a current of 5.0 A is rotated in a magnetic field of strength 0.20 T. In a particular position of the coil, the torque acting is half of the maximum torque. The angle between the magnetic field and the plane of the coil is

1) 60°
2) 30°
3) 90°
4) 100°

38. In a Young's double slit experiment, slits are separated by 0.5 mm, and the screen is placed 150 cm away. A beam of light consisting of two wavelengths, 600 nm and 500 nm, is used to obtain interference fringes on the screen. The least distance from the common central maximum to the point where the bright fringes due to both the wavelengths coincide is

1) 90 μm
2) 900 μm
3) 9 μm
4) 9 mm

39. The electric field part of an electromagnetic wave in a medium is represented by $E_x = 0$;

$$E_y = 2.5\frac{N}{C}\cos\left[\left(2\pi\times10^6\frac{rad}{m}\right)t-\left(\pi\times10^{-2}\frac{rad}{s}\right)x\right];$$

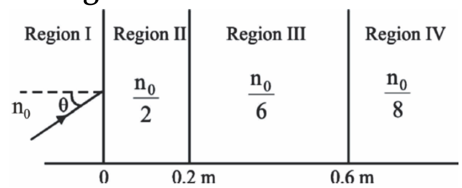
$E_Z = 0$. The wave is

1) Moving along $-x$ direction with frequency 10^6 Hz and wave length 200 m
2) Moving along y direction with frequency $2\pi \times 10^6$ Hz and wave length 200 m
3) Moving along x direction with frequency 10^6 Hz and wave length 100 m
4) Moving along x direction with frequency 10^6 Hz and wave length 200 m

40. The binding energy of deuteron ${}^2_1H$ is 1.112 MeV per nucleon and an α-particle ${}_2He^4$ has a binding energy of 7.047 MeV per nucleon. Then in the fusion reaction, ${}^2_1H + {}^2_1H \rightarrow {}^4_2He + Q$, the energy Q released is

1) 1 MeV
2) 11.9 MeV
3) 23.8 MeV
4) 931 MeV

41. A light beam is traveling from Region I to Region IV (Refer Figure). The refractive index in Regions I, II, III and IV are $n_0, \frac{n_0}{2}, \frac{n_0}{6}$ and $\frac{n_0}{8}$, respectively. The angle of incidence θ for which the beam just misses entering Region IV in figure



1) $\sin^{-1}\left(\frac{3}{4}\right)$
2) $\sin^{-1}\left(\frac{1}{8}\right)$
3) $\sin^{-1}\left(\frac{1}{4}\right)$
4) $\sin^{-1}\left(\frac{1}{3}\right)$

42. A uniform rope of length L and mass m_1 hangs vertically from a rigid support. A block of mass m_2 is attached to the free end of the rope. A transverse pulse of wavelength λ_1 is produced at the lower end of the rope. The wavelength of the pulse when it reaches the top of the rope is λ_2. The ratio λ_2 / λ_1 is

1) $\sqrt{\frac{m_1}{m_2}}$
2) $\sqrt{\frac{m_1+m_2}{m_2}}$
3) $\sqrt{\frac{m_2}{m_1}}$
4) $\sqrt{\frac{m_1+m_2}{m_1}}$

43. A body of uniform cross-sectional area floats in a liquid of density thrice its value. The portion of exposed height will be

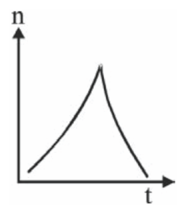
1) 2/3
2) 5/6
3) 1/6
4) 1/3

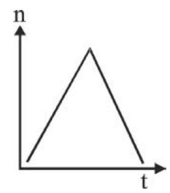
Space For Rough Work

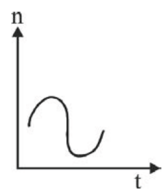
44. At a pressure of 24×10^5 dyne cm^{-2}, the volume of O_2 is 10 litre and mass is 20 g. The rms velocity will be

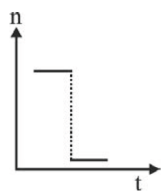
1) 800 ms^{-1} 2) 400 ms^{-1}
3) 600 ms^{-1} 4) Data is incomplete

45. A sound source, emitting sound of constant frequency, moves with a constant speed and crosses a stationary observer. The frequency (n) of sound heard by the observer is plotted against time (t). Which of the following graphs represents the correct variation

1) 

2) 

3) 

4) 

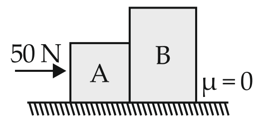
46. A variable force, given by the 2-dimensional vector $\vec{F} = (3x^2\vec{i} + 4\vec{j})$, acts on a particle. The force is in newtons and x is in metres. What is the change in the kinetic energy of the particle as it moves from the point with coordinates (2, 3) to (3, 0) ? (The coordinates are in metres)

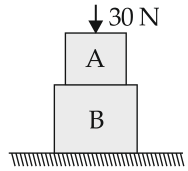
1) –7 Joules 2) Zero
3) +7 J 4) +19 J

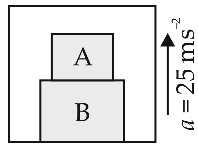
47. Two light wave from coherent sources superimpose at point A with phase difference 0 & at point B with phase difference of π / 2. Calculate ratio of resultant intensities of point A and B

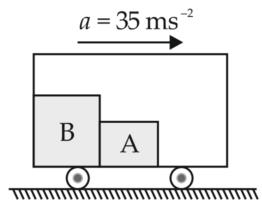
1) 1 : 1 2) 2 : 1
3) 4 : 1 4) 1 : 4

48. In which of the following cases the contact force between A & B is maximum? ($m_A = m_B$ = 1 kg, g =10 ms^{-2})

1) 

2) 

3) 

4) 

49. The average translational energy and the r.m.s. speed of molecules in a sample of oxygen gas at 300 K are 6.21×10^{-21} J and 484 m/s respectively.The corresponding values at 600 K are nearly:(assuming ideal gas behaviour)

1) 12.42×10^{-21} J, 968 m/s
2) 8.78×10^{-21} J, 684 m/s
3) 6.21×10^{-21} J, 968 m/s
4) 12.42×10^{-21} J, 684 m/s

50. Find out the mass of Uranium required per day operate 0.95 MW nuclear power plant using $_{92}U^{235}$ fission. (given energy in one reaction of $_{92}U^{235}$ atom is = 200 MeV)

1) 1 gm 2) 10 kg
3) 100 kg 4) 100 gm

Space For Rough Work

Section 'B' : Chemistry

Section 'A'

51. Number of Oxygen atoms are maximum in

1) 0.2 moles of $BaCO_3$
2) 1 mole of H_3PO_4
3) 0.5 moles of $C_6H_{12}O_6$
4) 0.75 mole of CO_2

52. An element has 2 electrons in K shell, 8 electrons in L shell, 13 electrons in M shell and one electron in N shell. The element is

1) Cr 2) Fe
3) V 4) Ti

53. The element with highest electron gain enthalpy will belong to

1) Period 2, group 17
2) Period 3, group 17
3) Period 2, group 18
4) Period 2, group 1

54. During the change of O_2 to O_2^-, the incoming electron goes to the orbital

1) σ^*2pz 2) $\pi 2py$
3) π^*2px 4) $\pi 2px$

55. The best method to separate the mixture of ortho and para nitrophenol (1 : 1) is

1) Steam distillation 2) Crystallisation
3) Vapourisation 4) Colour spectrum

56. The correct order of increasing s-character (in percentage) in the hybrid orbitals of the following molecule/ion is

I. CO_3^{2-} **II. XeF_4**
III. I_3^- **IV. NCl_3**
V. $BeCl_2$

1) II < III < IV < I < V
2) II < IV < III < V < I
3) III < II < I < V < IV
4) II < IV < III < I < V

57. At very high pressures, the compressibility factor of one mole of a gas is given by

1) $1+\frac{Pb}{RT}$ 2) $\frac{Pb}{RT}$
3) $1-\frac{Pb}{RT}$ 4) $1-\frac{b}{(VRT)}$

58. For a reaction, $\Delta H = -40$ kJ and $\Delta S = -50$ J/K. At what temperature range will it change from spontaneous to non-spontaneous ?

1) 0.8 K to 1 K 2) 799 K to 800 K
3) 800 K to 801 K 4) 799 K to 801 K

59. For the reaction,

$PCl_5(g) \rightleftharpoons PCl_3(g) + Cl_2(g)$

The forward reaction at constant temperature is favoured by :

1) Introducing an inert gas at constant volume
2) Introducing chlorine gas at constant volume
3) Introducing an inert gas at constant pressure
4) Introducing PCl_5 at constant volume

60. A 50 ml solution of pH = 1 is mixed with a 50 ml solution of pH = 2 the pH of the mixture is

1) 0.86 2) 1.26
3) 1.76 4) 2.26

61. Which of the following is not redox reaction:

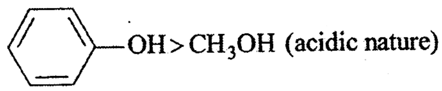
1) $NaOH + HCl \rightarrow NaCl + H_2O$
2) $2H_2 + O_2 \rightarrow H_2O_2$
3) $Na + H_2O \rightarrow NaOH + 1/2H_2$
4) $H_2 + Br_2 \rightarrow 1HBr$

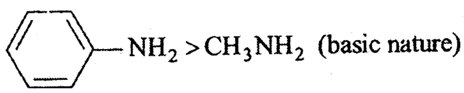
Space For Rough Work

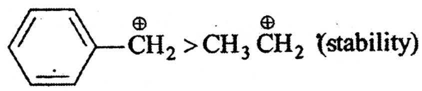
62. Select incorrect order

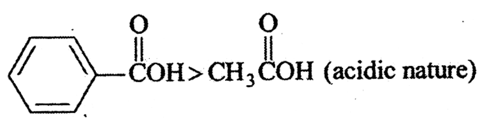
1) $Be(OH)_2 < Mg(OH)_2 < Ca(OH)_2$ – Solubility in H_2O
2) $BeCO_3 < MgCO_3 < CaCO_3$ - Thermal stability
3) Cs < Rb < K < Na < Li - Ease of formation of hydrides
4) CsH > RbH > KH > NaH - Stability

63. Which comparison is not correct as indicated?

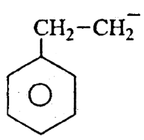
1) 

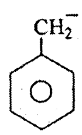
2) 

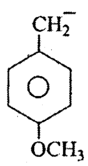
3) 

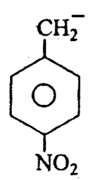
4) 

64. The most stable carbanion among the following is

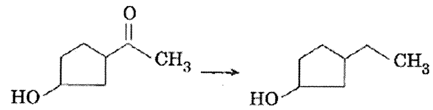
1) 

2) 

3) 

4) 

65. The appropriate reagent for the following transformation is



1) Zn–Hg/HCl
2) $H_2N–NH_2$, KOH
3) Ni/H_2
4) $NaBH_4$

66. Incorrect match is

1) Permutit → Hydrated silicates of Na and Al
2) Calgon → Sodium Hexameta phosphate
3) BeH_2, MgH_2 → Covalent polymeric hydride
4) Hydrolith → electron deficient hydride

67. A solid compound contains x, y, z atoms in a cubic lattice with x atoms occupying the corner, y atoms in the body centered positions and z atoms at the centres of faces of the unit cell. What is the empirical formula of the compound?

1) XY_2Z_3
2) XYZ_3
3) $X_2Y_2Z_3$
4) X_8YZ_6

68. If sodium sulphate is considered to be completely dissociated into cations and anions in aqueous solution, the change in freezing point of water (ΔT_f), when 0.01 mol of sodium sulphate is dissolved in 1 kg of water is (K_f = 1.86 kg mol^{-1})

1) 0.0186 K
2) 0.0372 K
3) 0.0558 K
4) 0.0744 K

Space For Rough Work

69. What would be the ratio of moles each of Ag^+, Cu^{+2}, Fe^{+3} ions would be deposited by passage of same quantity of electricity through solutions of their salts

1) $1:1:1$ 2) $1:\frac{1}{2}:\frac{1}{3}$

3) $\frac{1}{3}:\frac{1}{2}:1$ 4) $1:2:3$

70. Given :

$E^\circ_{Ag^+/Ag} = +0.80V$, $E^\circ_{Co^{2+}/Co} = -0.28V$

$E^\circ_{Cu^{2+}/Cu} = +0.34V$, $E^\circ_{Zn^{2+}/Zn} = -0.76V$

Which metal will corrode fastest?

1) Ag 2) Cu

3) Co 4) Zn

71. Which of the following does not affect the rate of reaction ?

1) Amount of the reactants taken

2) Physical state of the reactants

3) ΔH of reaction

4) Size of the vessel

72. Electrolytic refining is used to purify which of the following metals ?

1) Cu, Ag, Pb and Zn 2) Ge and Si

3) Zr and Ti 4) Zn and Hg

73. In the statements regarding P_4 molecule

i) the oxidation state is zero

ii) the covalency is 4

iii) the P–P–P bond angle 60°

the correct combination is

1) only iii is correct 2) i and iii are correct

3) all are correct 4) i and ii are correct

74. Very pure N_2 can be obtained by

1) Thermal decomposition of ammonium dichromate

2) Treating aqueous solution of NH_4Cl and $NaNO_2$

3) Liquefaction and fractional distillation of liquid air

4) Thermal decomposition of sodium azide

75. Which of the following has peroxy linkage?

1) $H_2S_2O_3$ 2) H_2SO_5

3) $H_2S_2O_7$ 4) $H_2S_4O_6$

76. Which kind of isomerism is exhibited by Octahedral $[Co(NH_3)_5Br]Cl$?

1) Ionization isomerism

2) Geometrical isomerism

3) Optical isomerism

4) All of them

77. Which of the following is the correct order of increasing field strength of ligands to form coordination compounds ?

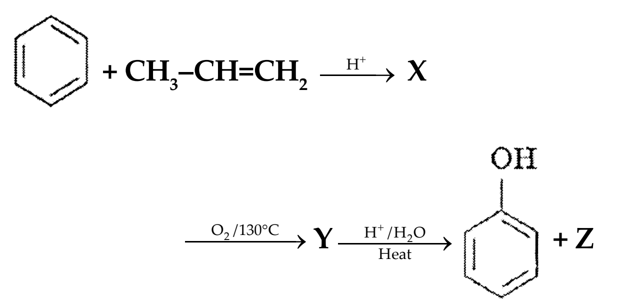
1) $CO < CN^- < en < NH_3 < edta^{-4}$

2) $S^{-2} < Cl^- < SCN^- < Br^- < I^-$

3) $NCS^- < H_2O < C_2O_4^{-2} < OH^- < F^-$

4) $SCN^- < OH^- < NCS^- < NH_3 < CO$

78. The product X and Z in the following reaction are



1) Isopropyl benzene and acetone

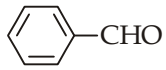
2) Cumene peroxide and acetone

3) Isopropyl benzene and isopropyl alcohol

4) Phenol and acetone

Space For Rough Work

79. Aldol condensation reaction is given by

1) 

2) HCHO

3) $CH_3–CH_2–CH_2–CHO$

4) $(CH_3)_3C–CHO$

80. The end product 'C' in the following sequence of chemical reaction is

$$CH_3COOH \xrightarrow{Ca(OH)_2} A \xrightarrow{Distillation} B \xrightarrow{NH_2OH} C$$

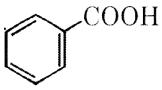
1) Acetaldehyde Oxime

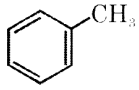
2) Formaldehyde Oxime

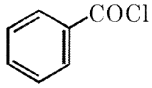
3) Methyl nitrate

4) Acetone Oxime

81. Reaction by which, Benzaldehyde cannot be prepared :

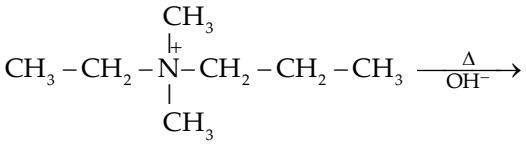
1)  +Zn/Hg and conc. HCl

2)  + CrO_2Cl_2 in CS_2 followed by $H_3O^{\oplus}$

3)  + H_2 in presence of $Pd+BaSO_4$

4)  + CO + HCl in presence of anhydrous $AlCl_3$

82. What is the major product of the following reaction ?



1) $CH_2 = CH_2$ 2) CH_2=CH–CH_3

3)  4) CH_3–CH=CH–CH_3

83. At high concentration of soap in water, soap behaves as

1) Molecular colloid 2) Associated colloid

3) Macro molecular colloid

4) Lyophilic colloid

84. Cellulose is a polymer of

1) β-glucose 2) α-glucose

3) Fructose 4) β-galactose

85. Dettol is an example of

1) Antiseptic 2) Antimalarial

3) Antibiotic 4) Antifertility drug

Section 'B'

86. The de-Broglie's wavelength of electron present in first Bohr orbit of 'H' atom is

1) $\frac{0.529}{2\pi}$ Å 2) $2\pi \times 0.529$ Å

3) 0.529 Å 4) 4×0.529 Å

87. Heat of combustion of C_2H_4 is –337 K.Cal. If 5.6 lit O_2 is used at STP in the combustion. Heat liberated is ..... K Cal

1) 28.08 2) 14.04

3) 42.06 4) 56.16

88. For the reactions :

$2NO + O_2 \rightleftharpoons 2NO_2$; K_1

$4NO + 2Cl_2 \rightleftharpoons 4NOCl$; K_2

$2NO_2 + Cl_2 \rightleftharpoons 2NOCl + O_2$; K_3

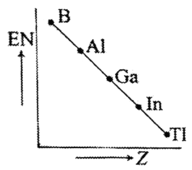
Where K_1, K_2, K_3 are equilibrium constants then K_3^2 equal to :

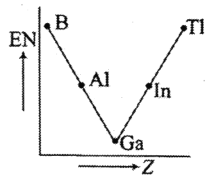
1) $\sqrt{K_2/K_1}$ 2) $\sqrt{K_1K_2}$

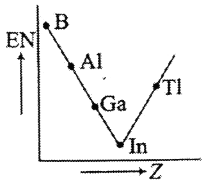
3) $\sqrt{K_2}/K_1$ 4) $\frac{1}{K_1K_2}$

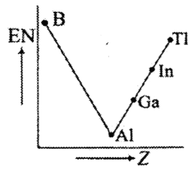
Space For Rough Work

89. Which one of the following correctly represents the variation of electronegativity (EN) with atomic number (Z) of group 13 elements ?

1) 

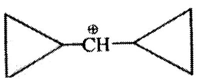
2) 

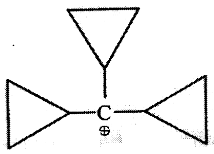
3) 

4) 

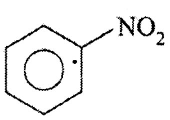
90. Most stable carbocation in the following

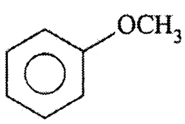
1) $(C_6H_5)_2\overset{+}{C}H$ 2) $(CH_3)_3C^+$

3) 

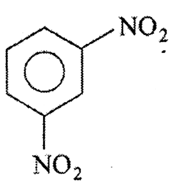
4) 

91. In which of the following molecules, π-electron density in ring is minimum ?

1) 

2) 

3) 

4) 

92. Equal moles of benzene and toluene are mixed. The vapour pressure of benzene and toluene in pure state are 700 and 600 mm Hg respectively. The mole fraction of benzene in vapour state is

1) 0.7 2) 0.47
3) 0.50 4) 0.54

93. The half life period of a first order chemical reaction is 6.93 minutes. The time required for the completion of 99% of the chemical reaction will be (log 2 = 0.301)

1) 230.3 min 2) 23.03 min
3) 46.06 min 4) 460.6 min

94. Which of the following electrolysis will have maximum coagulation value for AgI/Ag^+ sol ?

1) Na_2S 2) Na_3PO_4
3) Na_2SO_4 4) NaCl

95. Match the following columns

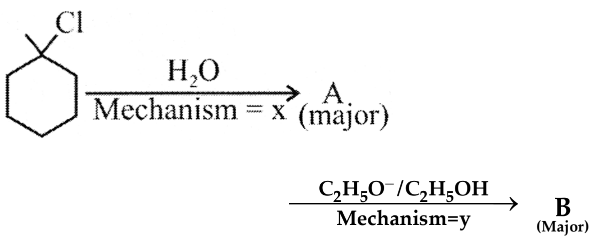
Column I (Metal ions)	Column II (Magnetic moment BM)
A. Cr^{3+}	1. $\sqrt{35}$
B. Fe^{2+}	2. $\sqrt{30}$
C. Ni^{2+}	3. $\sqrt{24}$
D. Mn^{2+}	4. $\sqrt{15}$
	5. $\sqrt{8}$

1) A-1, B-3, C-5, D-4
2) A-2, B-3, C-5, D-1
3) A-4, B-3, C-5, D-1
4) A-4, B-5, C-3, D-1

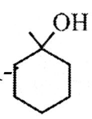
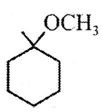
Space For Rough Work

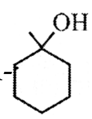
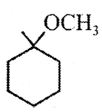
96. **The spin only magnetic moment of $[MnBr_4]^{2-}$ is 5.9 B.M. The geometry of complex ion is**

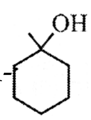
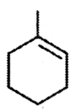
1) Tetrahedral
2) Square planar
3) Trigonal bipyramidal
4) Octahedral

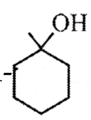
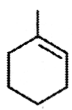
97. 

Choose correct option for mechanism x and y, product A and B.

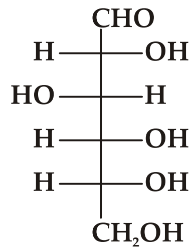
1) x - S_N2 ; y - S_N2 ; A-  ; B- 

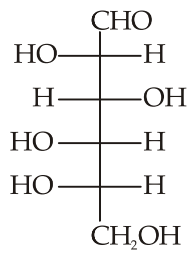
2) x - S_N1 ; y - S_N2 ; A-  ; B- 

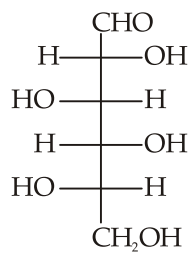
3) x - S_N1 ; y - E_2 ; A-  ; B- 

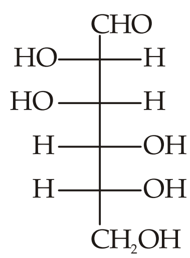
4) x - S_N1 ; y - E_1 ; A-  ; B- 

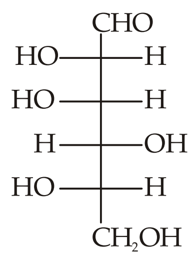
98. **If the following is D-glucose, what will be L-Glucose ?**



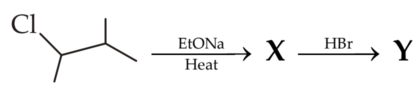
1) 

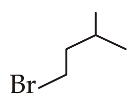
2) 

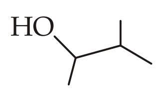
3) 

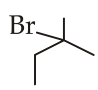
4) 

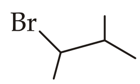
99. **The major product 'Y' in the following reaction is**



1) 

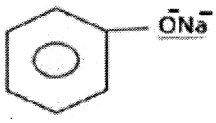
2) 

3) 

4) 

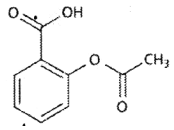
Space For Rough Work

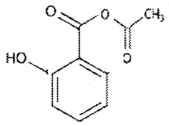
100. The product (major) C is

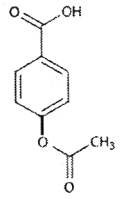


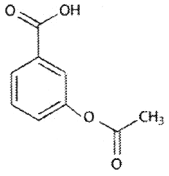
$+ CO_2 \xrightarrow[5atm]{125^\circ}$ **B(major)**

$\xrightarrow{H^+/H_2O \text{ and } AC_2O}$ **C**

1) 

2) 

3) 

4) 

Space For Rough Work

Section 'C' : Botany

Section-A

101. Out of the more than 105 elements discovered so far less than ________ are essential and beneficial for normal plant growth and development. [NCERT 11th, summary page No.205]

1) 17 2) 9
3) 8 4) 21

102. Ammonia produced during N_2 fixation is incorporated into __A__ as the __B__ group. [NCERT 11th, summary page No.205]

1) A - amino acid, B - Imino group
2) A - amino acid, B - amino group
3) A - amino acid, B - amide group
4) A -ureids, B - amide group

103. Various ions and water from soil can be transported up to a small height in stem by [NCERT 11th, summary page No.192]

1) Osmosis 2) Cyclosis
3) Root pressure 4) Diffusion

104. Gametes are formed in haploid organism through [NCERT 11th, summary page No.16]

1) Meiosis 2) Mitosis
3) More than 1 correct 4) Syngamy

105. Biological classification of plants and animals was first proposed by __________ on the basis of simple ______________

[11th NCERT Pg. No.27: Summary]

1) Linn., Anatomical Characters
2) Aristotle, Morphological Character
3) Linn., Morphological Characters
4) Aristotle, colour of blood

106. __________ are cosmopolitan in distribution and these organisms show the most extensive _________ [11th NCERT Pg. No.27: Summary]

1) Fungi, Habitat diversity
2) Euglenoids, Metabolic diversity
3) Bacteria, Metabolic diversity
4) Protozoans, Habitat diversity

107. _______ plant body is more differentiated than that of algae[11th NCERT Pg. No.43: Summary]

1) Bryophytes 2) Protozoans
3) Euglenoids 4) Thallophyte

108. The sporophytes bear ___________ to produce spores [11th NCERT Pg. No.43: Summary]

1) Sporophyll 2) Microsporophyll
3) Macrosporophyll 4) Sporangium

109. _____ is a lateral outgrowth of stem developed _________ at the node [11th NCERT Pg. No 82.: Summary]

1) Leaf, Exogenously 2) Bud, Endogenously
3) Leaf, Endogenously 4) Flower, Internode

110. ____________ form the basis of classification and identification of flowering plants.

[11th NCERT Pg. No.82: Summary]

1) Morphological Characters
2) Anatomical Characters
3) Floral Characters
4) Vegetative Characters

111. Curly top virus spreads through a plant via the food conducting or phloem tissue.

[11th NCERT Pg. No.64: Unit Introduction]

1) Katherine Esau 2) D. J. Ivonwosky
3) Walter Sutton 4) P. Maheshwari

112. How many of the following are the main functions of the tissues [11th NCERT Pg. No.98: Summary]

A) Assimilation of food
B) Food storage
C) transportation of water minerals and photosynthates
D) Mechanical support

1) Only 3 2) Only 2
3) Only 1 4) All 4

113. Fats and oils are ______________

[11th NCERT Pg. No.159-160: Summary]

1) Glycerol 2) Glycerides
3) Polysaccharides 4) Chylomicron

114. chemosynthetic pathway occurs in the _____

[11th NCERT Pg. No.224: Summary]

1) Grana 2) Stroma
3) Lamellae 4) Matrix

115. In the light reaction the light energy is absorbed by the pigments present in the antenna, and funnelled to special chlorophyll a molecule called ________ [11th NCERT Pg. No.224: Summary]

1) Reaction Center 2) Pigment System
3) LHC 4) Quiescent center

116. The fate of the pyruvate depends on the availability of ________ and the ________

[11th NCERT Pg. No.237: Summary]

1) Oxygen, organism
2) Carbon dioxide, oxygen
3) Nitrogen, Organism
4) Type of fermentation, organism

117. Cells of the sporogenous tissue lying in the

[12th NCERT Pg. No.39-40: Summary]

1) Center of the microsporangium
2) Periphery of the bilobed anther
3) Abaxial surface of ovules
4) Adaxial surface of anther

118. The central tissues of ________ differentiated in to archaesporial cells [12th NCERT Pg. No.39-40: Summary]

1) Sporogenous cells 2) Nucellus
3) Ovules 4) Middle layer

119. Pollen – pistil interaction involves

[12th NCERT Pg. No.39-40: Summary]

1) All events from landing of pollen grain on stigma to entry of pollen grain in to embryo sac
2) All events from Dispersion through pollen sac of pollen grain to stigma to entry of pollen grain in to embryo sac
3) All events from landing of pollen grain on stigma to entry of pollen tube in to embryo sac
4) All events from landing of pollen grain on stigma to double fertilization and triple fusion

120. A ________ character that was not expressed in ________ condition may be expressed again when it becomes homozygous. [12th NCERT Pg.No.92-93: Summary]

1) Recessive, Heterozygous
2) Dominant, Heterozygous
3) Heterozygous, Recessive
4) Homozygous, heterozygous

121. Select the not incorrect statement

[12th NCERT Pg. No.92-93: Summary]

1) Not all characters show true dominance because Some characters show incomplete, and some show co-dominance
2) All characters show true dominance because incomplete dominance and codominance does not retain the parental combination in further generation
3) Some characters incomplete dominance but codominance and parental type is incomplete for the recessive traits
4) If codominance is the main criteria, then the parental combination is as same as incomplete dominance.

122. Identify the not-incorrect

[12th NCERT Pg. No.124: Summary]

1) DNA and RNA both function as genetic material, but DNA being chemically and structurally more stable is a better genetic material.
2) DNA and RNA both function as genetic material, but RNA being chemically and structurally more stable is a better genetic material.
3) Only RNA function as genetic material, because DNA being chemically and structurally more unstable is a better genetic material.
4) DNA and RNA both function as genetic material, but DNA being chemically and structurally more unstable is a better genetic material.

123. The DNA replicates semiconservatively, the process is guided by [12th NCERT Pg. No.124: Summary]

1) Antiparallel polynucleotide chain
2) complementary H-bonding
3) Stacking base pair
4) Phosphodiester bond formation

124. _____ is/are energetically very expensive processes. [12thNCERT Pg. No.124: Summary]

1) Transcription, Translation
2) Translation, Splicing
3) Replication, Translation
4) Splicing, Transcription

125. The triple crown of biology received by Ernst Mayr includes : [NCERT 11th page 2, Introduction]

1) Crafoord Prize
2) Balan Prize
3) International prize of biotogy
4) All of these

126. _____ contribute to elongation growth of plant axes. [NCERT 11th page 253, Summary]

1) Root and shoot apical meristems
2) Intercalary meristems
3) Cambium
4) More than one correct

127. Certain plants need to be exposed to low temperature so as to hasten flowering later in life. This treatment is known as [NCERT 11th page 253, Summary]

1) Plasticity
2) Vernalization
3) Photoperiodism
4) None of these

128. Which of the following is related with Ramdeo Misra

1) Father of Indian Ecology
2) Formulated 1st Post graduate course in ecoloty
3) Due to his efforts, Govt. of India, established the National commitee for environment planning and co-ordination [1972], which in later year paved the way for establishment of ministry of environment and forest [1984]
4) All of these

129. Evolutionary changes through natural selection, takes place at

[NCERT Summary, Page-238, Para-3rd, Line-1,2]

1) Organismic level
2) Population level
3) Community level
4) Blome level

130. Which of the following statement/s are related with ecosystem and organism respectively

[NCERT Summary, page-256, Line-1,2]

a) Structural and functional unit of nature

b) Unit of ecology

c) Unit of ecological study

1) a and b for ecology and c for
2) a for ecology and b,c for
3) a, b, c for ecosystem only
4) a, b, c for organism only

131. Rate of assimilation of food energy by consumers is [NCERT Summary, Page-256, Para-2nd, Line-7,8,9]

1) GPP
2) NPP
3) Secondary productivity
4) Respiratory loss

132. On earth number of inventery [recorded] species and number of estimated species [Which are waiting to be discovered] are

1) 6 million and 1.5 million
2) 1.5 million and 6 million
3) 2 million and 4 million
4) 6 million and 2 million

133. Shape of graph for species richness [Species area relation ship]

[NCERT 12th, Summary, Page-268, 2nd Para Last-2nd Lines]

1) Rectangular hyperbola
2) Linear
3) 'J' shaped
4) Sigmoid

134. Air pollution primarily results from

[VIMP for NEET] [NCERT Summary 12th, Page-285,Line-3,4]

1) Deforestation
2) Burning of fossil fuel
3) Farting at night
4) Burning of wood in rural area

135. The most common source of pollution of water bodies [VIMP for NEET] [NCERT Summary, 12th, Page-285, Line-5,6,7]

1) Domestic sewage
2) Using chemical fertilisers
3) Chemical pesticides
4) Early moring defecation near the bank of river

Section-B

136. Excess water removed through tips of leaves of plant [NCERT 11th, summary page No.193]

1) Transpiration
2) Transduction
3) Guttation
4) Girdling process

137. The recessive characters are only expressed in ___________ conditions andthe characters ___________in heterozygous condition [12th NCERT Pg. No.92-93: Summary]

1) Heterozygous, bend
2) Homozygous, never bend
3) Heterozygous, never bend
4) Homozygous, bend

138. According to Francis Crick Ph.D. study X-ray Diffraction is used [12th NCERT Pg. No.67-68: Unit introduction]

1) Nucleic acids
2) Polypeptides and Proteins
3) Carbohydrates
4) Nucleic acids and Phosphoric acid

139. A phenomenon called Apomixis is found in [12thNCERT Pg. No.39-40: Summary]

1) A few gymnosperms and particularly Pinus
2) Some angiosperms and particularly citrus
3) a few angiosperms and some Gymnosperm
4) Some angiosperm particularly grasses

140. Apart from carbohydrates ________ can also be broken down to yield energy. [11thNCERT Pg. No.237-238: Summary]

1) Fats and Proteins
2) Proteins and Glucose
3) Glucose and organic acids
4) Fats and Glucose

141. After absorbing light, electrons are excited and transferred through "A"and "B"and finally to "C" forming "D" [12th NCERT Pg. No.224: Summary]

1) PSI, PSII, NADPH, NAD+
2) PSII, PSI, NAD+, NADPH
3) NAD+, NADPH, PSII, PSI
4) PSII, NAD+, NADPH, PSI

142. Proteinaceous enzymes exhibit [11thNCERT Pg. No.159-160: Summary]

A) Substrate specificity
B) Optimum temperature
C) pH

1) Only A
2) Only B
3) Only C
4) Only 3

143. Classification of the vascular bundles is depending on [11thNCERT Pg. No.98: Summary]

1) Presence of Cambium
2) Location of Xylem and Phloem
3) Formation in life span
4) more correct option

144. How many of the following are criteria help to differentiate the stems from roots [11th NCERT Pg. No.82: Summary]

A) Presence of nodes and internodes
B) Multicellular hair
C) Positively phototropic nature

1) Only 1
2) Only 2
3) Only 3
4) Only A

145. Algae are classified into three classes on the basis of [11th NCERT Pg. No.43: Summary]

A) Type of pigment
B) The type of stored food
C) The structure of flagella
D) The Storage of food

1) Only 1
2) Only 2
3) Only 3
4) Only A

146. In ecological study, all of the following levels of bioligical organisation are concerned except [NCERT Summary, Page 238, Line-3,4]

1) Ecosystem
2) Organism
3) Population
4) Community

147. Different organisms are placed in a food chain (ecosystem) on the basis of

[NCERT Summary, Page-256, Line-7,8]

1) Source of nutrition
2) Type of nutrition
3) Amount of food consumed
4) Biomass produced

148. It is belived that, community with ___ diversity tend to be ______ variable, _____ productive and ________ resistant to biological invasions

[NCERT summary 12th, Page-268, Para-3rd, Line-1,2,3]

1) Less, less, more, more
2) High, high, less, more
3) High, less, less, more
4) High, less, more, more

149. Soil Pollution, primarily results from

[NCERT Summary, 12th, Page-285, 1st Para, Last 2 lines]

1) Agriculture chemicals
2) Pesticides
3) Leachates from solid waste deposited over pesticides
4) All of these

150. Mendel's law of independent assortment does not hold true for the genes that were located on the [12th NCERT Pg. No.92-93: Summary]

1) Same chromosomes
2) Different chromosomes
3) Homologous chromosomes
4) Non-homologous chromosomes

Section 'D' : Zoology

Section-A

151. Generation of adenosine triphosphate in mitochondria is [NCERT 11th, summary page No.140]

1) Photo phosphorylation
2) Oxidative phosphorylation
3) Substrate phosphorylation
4) Pseudo phosphorylation

152. Single membrane structure containing enzyme for digestion of all types of macromolecules [NCERT 12th, summary page No.140]

1) Ribosome 2) Deroxisome
3) Lysosome 4) Centrosome

153. The process continues throughout life cycle [NCERT 11th, summary page No.170]

1) zygote formation 2) sygamy
3) More than 1 correct 4) Cell division

154. The period of cytoplasmic growth [NCERT 11th, summary page No.171]

1) G_1 2) S
3) G_2 4) G_0

155. The parasitic forms show distinct __(i)__ and __(ii)__. Aschelminthes are __(iii)__ include __(iv)__ as well as __(v)__ roondworms [NCERT 11th page 61, Summary]

1) Suckers, hooks, pseudocoelomates, parasitic, non-parasitic
2) Suckers, hooks, coelomates, parasitic, non-parasitic
3) Parapodia, pseudopodia, coelomates, parasitic, non-parasitic
4) More than one correct

156. Fishes, amphibians, reptiles are _____ [NCERT 11th page 61, Summary]

1) Poikilotherms 2) Cold-blooded
3) Warm - blooded 4) More than 1 correct

157. Somatic hybridiation is a process done _____ [NCERT 12th page 178, Summary]

1) Invivo 2) Invitro
3) Naturally 4) Invitro and artifically

158. The most accepted definition of biotechnology was given by [NCERT 12th page 253, Introduction]

1) WHO 2) ICAR
3) EFB 4) UNESCO

159. Large scale production involves use of _____ [NCERT 11th page 253, Summary]

1) Fementors 2) Bioreactors
3) Petri plate culture 4) More than 1 correct

160. The process to purify the protein or organic compound is called [NCERT 11th page 253, Introduction]

1) Upstream process
2) Downstream process
3) Marketing strategy
4) Recombinant DNA technology

161. The major components of our food are ___ [NCERT-257]

1) Carbohydrate, proteins & Vitamins
2) Carbohydrate, fat & proteins
3) Proteins, vitamins & fat
4) Carbohydrate, proteins, fat, vitamins & minerals

162. Salivary amylase that digests the starch and converts it into____? [NCERT-266]

1) Glucose 2) Maltose
3) Sucrose 4) all

163. Oxygen is utilised by the organisms to ___? [NCERT-268]

1) Directly breakdown simple molecules
2) Indirectly break down simple molecules
3) Directly break down of complex molecules
4) Indirectly breakdown of complex molecules

164. A sets the pace of the activities of the heart, hence it is called pacemaker, here identify the 'A' [NCERT-288]

1) A.V. Node 2) SA Node
3) Bundle of His's 4) All

165. The blood is pumped out by each ventricle during a cardiac cycle and it is called the ? **[NCERT-288]**

1) Beat volume
2) Cardiac output
3) Stroke volume
4) More than 1 correct

166. Animals accumulate- **[NCERT-290]**

1) Ammonia, urea and uric acid
2) CO_2, water and ions.
3) More than one correct
4) None

167. Many bony fishes, aquatic amphibians and aquatic insects are____ in nature. **[NCERT-290]**

1) ureotelic
2) Uricotelic
3) Aminotelic
4) Ammonotelic

168. The process through which two or more organs interact and complemnt the functions of one another. **[NCERT-315]**

1) Integration
2) Coordiantion
3) Reflex action
4) All

169. A very important part of fore braincalled hypothalmus controls the - **[NCERT-327]**

1) Temperature
2) Eating
3) Drinking
4) All

170. Father of 'Green revolution' in india is - **[NCERT-144]**

1) M. S. swaminathan
2) James watson
3) Alfonso corti
4) Landsteiner

171. Evolutionary biology is the study of - **[NCERT-126]**

1) History of life forms on earth
2) Fossils
3) Change on earth
4) None

172. Which of the following provides evidence for evolution - **[NCERT-142]**

1) Study of comparative anatomy
2) Fossils
3) Comparative biochemistry
4) All

173. Health is affected by - **[NCERT-145]**

1) Genetic disorders
2) Infections
3) Life style
4) All

174. Vector borne disease is - **[NCERT-163]**

1) Cancer
2) HIV
3) Malaria
4) Cirrhosis

175. Biology is the youngest of the formalised disciplines of ____ **[NCERT-143]**

1) Hypothesis
2) Natural science
3) space science
4) Plaeontology

176. In animal body different organ are formed but by using only four types of tissue. It is possible because of **[NCERT 11th, Page 100, 2nd Para, Line 2,3,4]**

1) Due to modification of cells every time during organ formation
2) Due to arrangement of tissue in a specific proportion and pattern
3) Due to different cell in the same tissue
4) None of these

177. How many salivary glands are present in cockroach, near crop

[NCERT 11th, Page 121, Summary 2nd para, line 9,10]

1) One pair
2) Two pair
3) Three pair
4) Three

178. Alfanso corti was

[NCERT 11th, Page 256, Unit Introduction]

1) Italian anatomist
2) Americal biologist
3) French Naturalist
4) Russsian scientist

179. "Basilar membrane of cochlea contains hair cells, that convert sound vibrations into nerve impulse". This concept was given by

1) Alfanso corti
2) Lewis
3) Luise pasture
4) Rober Brown

180. Which of the following statements is/are true

1) A female reproductive sytem consists of a pair of ovaries, a pair of oviducts, a uterus, a vagina, external genitalia and a pair of mammary gland

[NCERT summary Page-55m, 2nd para line 1,2,3,4]

2) Ovarian follicles in different stage of development are embeded in the stroma

[NCERT summary, Page-55, 2nd para, line 4,5]

3) The process of formation of mature female gamete is oogenesis

4) All of these

181. Mammary glands undergoes differentiation during [NCERT Summary, page 55, Last 3 lines]

1) Pregnancy only 2) Puberty

3) Menopause 4) 1 to 12 years

182. Infertility is inability to conseive or produce child, even after _"A"_ years of __B__ sexual cohabitation. A and B respectively are

[NCERT summary, page-65,Last Para,line 1,2]

1) One year and unprotected

2) Two year and protected

3) One year and protected

4) Two year and unprotected

183. Which of the following country in the world, to initiate various action plans at National level, towards attening a reproductively healthy society

[Most Imp, NCERT Summary, Page-65, Line-2,3,4]

1) India 2) China

3) Russia 4) America

184. The concept of crop cafeteria, crop scheduling and genetically improving the yield and quality was given by

[NCERT 'Unit Summary' page-144 Para 1 & 2nd]

1) Khurana

2) Mendel

3) Monkambu Sambashivan Swaminathan

4) Humbolt

185. The concept of "Lab to land", food security etc. were given by

1) Khurana

2) Mendel

3) Monkambu Sambashivan Swaminathan

4) Humbolt

Section-B

186. Select the incorrect statements [NCERT 11th, summary page No.140]

1) The endomembrane system includes ER, golgi complex lysosomes and vacuoles.

2) Centrosome and centriole form the basal body of cilia and flagella

3) Centrioles form spindle apparatus during cell division in all types of cell.

4) Chromoplasts may contain carotene and xanthophyll

187. ________ are absent in snakes [NCERT 11th page 61, Summary]

1) Eyes 2) Limbs

3) parapodia 4) water vascolar system

188. Several new techniques like _____ and _____ play pivotal role in enhancing food production [NCERT 12th page 253, Introduction]

1) Plant tissue culture, animal tissue culture

2) Embryo transfer technology, plant breeding

3) Embryo transfer technology, tissue culture

4) More than one correct

189. Modern biotechnology uses the construction of ________ [NCERT 11th page 253, Introduction]

1) Recombinant DNA

2) Chimeric DNA

3) Passenger DNA

4) All of these

190. The undigested food becomes ___ in nature and then enters into the ____? [NCERT-267]

1) Solid, rectum 2) semisolid, Colon

3) Liquify, colon 4) Semisolid, Rectum

191. Who began his scientific carrer studying the cardiovascular system of reptile and later be turned his attention to the mammalian auditory system? [NCERT-256]

1) Alfonso corti 2) Ernest mayr

4) Eatherine esau 4) Melvin colvin

192. Creating pressure gradients between the atomsphere and the alveoli with the help of - [NCERT-276]

1) Intercostal muscles and diaphragm

2) Diaphraghm and abdominal muscles.

3) Intercostal muscles and abdomind muscles

4) None

193. The pulmonary circulation starts by the pumping of A blood by the B which is carried to the C where it is D and returned to the left atrium. identify the A, B, C, and D. [NCERT-289]

	A	B	C	D
1	Deoxygeneted	Right ventricle	Lungs	Oxygeneted
2	Right ventricle	Lungs	Oxygeneted	Deoxygeneted
3	Lungs	Deoxygeneted	Right ventricle	Oxygeneted
4	Deoxygeneted	Oxygeneted	Lungs	Right ventricle

194. Dialysis fluid contain all the constituents as in plasma except____? [NCERT-299]

1) Anticoagulant 2) Nitrogenous waste.

3) More than 1 correct 4) Minerals.

195. Point to point rapid coordination among organs provides - [NCERT-331]

1) Neural system 2) endocrine system

3) Integrative system 4) All

196. Homology is accounted for by the idea of - [NCERT-142]

1) Branching descent

2) Convergent evolution

3) Mutation

4) Migration

197. How disproved the 'good humor' hypothesis of health. [NCERT-145]

1) Discovery of blood circulation

2) Demonstration of normal body temperature in presons with black bile

3) More than one correct

4) Not disproved

198. The type of joint which allows "considerable movement" during movement in human body is [NCERT 11th, Page-313, Summary, Last two lines]

1) Cartilagenous joint 2) Fibrous joint

3) Synovial joint 4) None of these

199. The complex neunendocrine mechanism in parturation involves

a) Oxytocin b) Oestrogen

c) Cortisol

[NCERT 12th, Page-55, Summary : last 5 lines]

1) a, b, c 2) a, b

3) b, c 4) a only

200. Antibiotics are used to control all of the following conditions except

[NCERT Summary 12th, Page 188, Last 2 lines]

1) Diphtheria

2) Whooping cough

3) Myocardial infration

4) Pneumonia