NEET (UG)

Sample Question Paper - 1

Full Mock Test | 200 Questions | Time: 3 Hours | Max. Marks: 720

Important Instructions:

1. There are 200 questions. Attempt only 180 questions. Each question carries 4 marks.

2. For each correct response: +4 marks. For each incorrect response: -1 mark. Unattempted: 0 marks.

3. There are 4 subjects. Each subject has 2 sections: Section A (35 questions, all compulsory) and Section B (15 questions, attempt only 10).

4. Maximum marks: 720.

PHYSICS

SECTION A

Q.1. A student measured the diameter of a small steel ball using a screw gauge of least count 0.001 cm. The main scale reading is 5 mm and the 25th division of the circular scale coincides with the reference level. If screw gauge has a zero error of -0.004 cm, the correct diameter of the ball is:

(A) 0.521 cm
(B) 0.529 cm
(C) 0.053 cm
(D) 0.525 cm

Q.2. A simple pendulum of period T has a metal bob which is negatively charged. If it is allowed to oscillate above a positively charged metal plate, its period will:

(A) Remain equal to T
(B) Be less than T
(C) Be greater than T
(D) Be infinite

Q.3. A common emitter amplifier has a voltage gain of 50, an input impedance of 100 ohm and an output impedance of 200 ohm. The power gain of the amplifier is:

(A) 1000
(B) 1250
(C) 100
(D) 500

Q.4. A person of mass 60 kg is inside a lift of mass 940 kg and presses the button on control panel. The lift starts moving upwards with acceleration 1.0 ms-2. If g = 10 ms-2, the tension in the supporting cable is:

(A) 8600 N
(B) 9680 N
(C) 11000 N

(D) 1200 N

Q.5. At constant volume, temperature of a cylinder is increased then:

(A) Collision on walls will be less
(B) Collision frequency will increase
(C) Collision will be in straight line
(D) Collision will not change

Q.6. A parallel beam of monochromatic light of wavelength 5000 A is incident normally on a single narrow slit of width 0.001 mm. The first minima will be formed for the angle of diffraction equal to:

(A) 0 degrees
(B) 15 degrees
(C) 30 degrees
(D) 60 degrees

Q.7. The acceleration due to gravity on planet A is 9 times the acceleration due to gravity on planet B. A man jumps to a height of 2 m on the surface of planet A. What is the height of the same jump on planet B?

(A) 18 m
(B) 6 m
(C) 2/3 m
(D) 219 m

Q.8. A particle is executing SHM along a straight line. Its velocities at distances x1 and x2 from the mean position are v1 and v2, respectively. Its time period is:

(A) 2pi*sqrt((x1^2+x2^2)/(v1^2+v2^2))
(B) 2pi*sqrt((x2^2-x1^2)/(v1^2+v2^2))
(C) 2pi*sqrt((x2^2-x1^2)/(v1^2-v2^2))
(D) 2pi*sqrt((v1^2-v2^2)/(x1^2-x2^2))

Q.9. A polarizer is used to:

(A) Reduce intensity of light
(B) Produce polarized light
(C) Increase intensity of light
(D) Produce unpolarized light

Q.10. The wettability of a surface by a liquid depends primarily on:

(A) Density
(B) Angle of contact between surface and liquid
(C) Viscosity
(D) Surface tension

Q.11. A small object of uniform density rolls up a curved surface with an initial velocity v. It reaches up to a maximum height of 3v^2/4g. The object is:

(A) Solid sphere
(B) Hollow sphere
(C) Disc
(D) Ring

Q.12. A physical quantity of the dimension of length that can be formed out of c, G and e^2/4*pi*epsilon_0 is: [c is velocity of light, G is universal gravitational constant, e is charge]

(A) e^2[G*e^2/4pi*eps0]^(1/2)
(B) (1/c^2)[e^2/G*4pi*eps0]^(1/2)
(C) (1/c)*G*e^2/4pi*eps0
(D) (1/c^2)[G*e^2/4pi*eps0]^(1/2)

Q.13. The oscillation of a body on a smooth horizontal surface is represented by X = A cos(wt). Which graph correctly shows variation of acceleration 'a' with time 't'?

(A) Graph (a): positive cosine curve
(B) Graph (b): sine curve
(C) Graph (c): negative cosine curve
(D) Graph (d): negative sine curve

Q.14. A plane polarised light coming out of a polarizer with intensity I0 enters an analyser kept at an angle of 45 degrees with the polarizer. Intensity of light out of the analyser is:

(A) I0
(B) I0/2
(C) I0/4
(D) Zero

Q.15. Three sound waves of equal amplitudes have frequencies (n-1), n, (n+1). They superimpose to give beats. The number of beats produced per second will be:

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

Q.16. The isothermal elasticity of a gas is equal to:

(A) Density
(B) Volume
(C) Pressure
(D) Specific heat

Q.17. If the dimensions of a physical quantity are given by [M^a L^b T^c], then the physical quantity will be:

(A) Force if a=0, b=-1, c=-2
(B) Pressure if a=1, b=-1, c=-2
(C) Velocity if a=1, b=0, c=-1
(D) Acceleration if a=1, b=1, c=-2

Q.18. Liquid oxygen at 50 K is heated to 300 K at constant pressure of 1 atm. The rate of heating is constant. Which graph represents the variation of temperature with time?

(A) Graph (a): linear rise, plateau (boiling), then rise
(B) Graph (b): exponential rise
(C) Graph (c): concave curve
(D) Graph (d): convex curve

Q.19. Velocity of light in glass (refractive index 1.5 w.r.t. air) is 2x10^8 m/s. In an unknown liquid the velocity is 2.5x10^8 m/s. The refractive index of the liquid w.r.t. air is:

(A) 0.64
(B) 0.80
(C) 1.20
(D) 1.44

Q.20. A semi-conducting device in series circuit passes current, but when polarity is reversed the current drops to almost zero. The device may be:

(A) A p-n junction
(B) An intrinsic semiconductor
(C) A p-type semiconductor
(D) An n-type semiconductor

Q.21. The electric potential at a point on the axis of an electric dipole depends on the distance r from the dipole as:

(A) proportional to 1/r
(B) proportional to 1/r^2
(C) proportional to r
(D) proportional to 1/r^3

Q.22. A long wire carrying steady current is bent into a circular loop of one turn with magnetic field B at centre. It is then bent into a coil of n turns. Magnetic field at centre of n-turn coil will be:

(A) nB
(B) n^2 B
(C) 2nB
(D) 2n^2 B

Q.23. From the I-V graph, identify the portion corresponding to negative resistance (portion where current decreases as voltage increases):

(A) DE
(B) CD
(C) BC
(D) AB

Q.24. Work done in increasing size of a soap bubble from radius 3 cm to 5 cm (surface tension = 0.03 N/m) is nearly:

(A) 0.2*pi mJ
(B) 2*pi mJ
(C) 0.4*pi mJ
(D) 4*pi mJ

Q.25. A particle of mass m moving with velocity v1 is given an impulse such that its velocity becomes v2. The impulse is equal to:

(A) m[|v2| - |v1|]
(B) (1/2)[v2^2 - v1^2]
(C) m[v2 + v1]

(D) m[v2 - v1]

Q.26. A metallic surface illuminated with wavelength lambda has stopping potential 3V0. With wavelength 2*lambda, stopping potential is V0. The threshold wavelength for photoelectric effect is:

(A) lambda/4
(B) lambda/6
(C) 6*lambda
(D) 4*lambda

Q.27. A sound of wavelength lambda in medium with speed v enters another medium where its speed is 2v. Wavelength of sound in second medium is:

(A) lambda
(B) lambda/2
(C) 2*lambda
(D) 4*lambda

Q.28. A man sitting with folded hands on a revolving table suddenly stretches his arms. Angular speed of the table would:

(A) Increase
(B) Decrease
(C) Remain the same
(D) Nothing can be said

Q.29. n equal resistors of value R each are connected in series to battery of emf E and internal resistance R; current drawn is I. When n resistors are connected in parallel to same battery, current becomes 10I. The value of n is:

(A) 20
(B) 11
(C) 10
(D) 9

Q.30. 2.0 kg of water held at constant volume; 10.0 kJ added by flame, 2.0 kJ leaks out. Temperature rise of water (specific heat water = 4200 J/kg K):

(A) 0.28 degrees C
(B) 27 degrees C
(C) 0.96 degrees C
(D) 1.27 degrees C

Q.31. Two heat engines A and B: source at 1000 K and 1100 K, sinks at 500 K and 400 K respectively. About their efficiencies:

(A) eA = eB
(B) eA > eB
(C) eA < eB
(D) Cannot predict

Q.32. Statement I: A car in horizontal circular motion with varying speed has net frictional force neither radial nor tangential. Statement II: Components of friction provide necessary tangential and centripetal acceleration.

(A) Both true; II explains I
(B) Both true; II does not explain I
(C) I true, II false
(D) I false, II true

Q.33. Through which character can we distinguish light waves from sound waves?

(A) Interference
(B) Refraction
(C) Polarization
(D) Reflection

Q.34. In a p-n junction diode, change in temperature due to heating:

(A) Does not affect resistance of p-n junction
(B) Affects only forward resistance
(C) Affects only reverse resistance
(D) Affects the overall V-I characteristics of P-N junction

Q.35. A charged pendulum bob oscillates in gravitational and electrostatic fields that are anti-parallel. The charge on bob is negative. If electric field is switched off, time period of small oscillations will:

(A) Increase
(B) Decrease
(C) Remain unchanged
(D) Depends on magnitudes of field

SECTION B

Q.36. A light string over smooth pulley connects two blocks m1 and m2 vertically. If acceleration of system is g/8, then ratio of masses is:

(A) 8:1
(B) 9:7
(C) 4:3
(D) 5:3

Q.37. If i1 = 3 sin(wt) and i2 = 4 cos(wt), then i3 = i1 + i2 is:

(A) 5 sin(wt + 53 degrees)
(B) 5 sin(wt + 37 degrees)
(C) 5 sin(wt + 45 degrees)
(D) 5 cos(wt + 53 degrees)

Q.38. A car of mass 1600 kg negotiates a banked curve of radius 160 m on frictionless road. Banking angle = 45 degrees. Speed of car is:

(A) 45 m/s
(B) 40 m/s
(C) 20 m/s
(D) 80 m/s

Q.39. Speed of a homogeneous solid sphere after rolling down inclined plane of vertical height h from rest without sliding is:

(A) sqrt(10gh/7)
(B) sqrt(gh)
(C) sqrt(6gh/5)
(D) sqrt(4gh/3)

Q.40. A charge of 40 micro-C is given to a capacitor C = 10 micro-F. The stored energy in ergs is:

(A) 80 x 10^-6
(B) 800
(C) 80
(D) 8000

Q.41. A car at 72 km/hr stops in 40 m after braking. If same car is at 144 km/hr, stopping distance after braking is:

(A) 80 m
(B) 160 m
(C) 200 m
(D) 240 m

Q.42. Two balls projected at 45 degrees and 60 degrees reach same maximum height. Ratio of initial velocities is:

(A) sqrt(2):sqrt(3)
(B) sqrt(3):sqrt(2)
(C) sqrt(2):sqrt(3)
(D) sqrt(3):sqrt(2)

Q.43. In which case is potential energy defined?

(A) Non-conservative forces only
(B) Conservative forces only
(C) Both conservative and non-conservative
(D) None of these

Q.44. An electron revolving around nucleus with angular momentum L has magnetic moment:

(A) (e/m)L
(B) (e/2m)L
(C) (2e/m)L
(D) (e/2*pi*m)L

Q.45. Magnetic flux across a loop of resistance 10 ohm is given by 10t^2 - 8t + 6 Wb. Current induced in loop after 2s is:

(A) 3.2 A
(B) 2.2 A
(C) 4.2 A
(D) 1.2 A

Q.46. Alternating voltage in series with R and L. Potential drop across R = 120 V and across L = 50 V. Supply voltage is:

(A) 170 V
(B) 70 V

(C) 130 V
(D) 110 V

Q.47. V = 10 sin(50*pi*t - pi/6) and I = 4 sin(50*pi*t + pi/6). Then:

(A) Voltage leads current by 60 degrees
(B) Voltage leads current by 30 degrees
(C) Current leads voltage by 30 degrees
(D) Current leads voltage by 60 degrees

Q.48. The acceleration of electron in first orbit of hydrogen atom is:

(A) 4*pi^2*m/h^3
(B) h^2/(4*pi^2*m*r)
(C) h^2/(4*pi^2*m^2*r^3)
(D) m^2*h^2/(4*pi^2*r^3)

Q.49. A radioactive substance disintegrates to 1/64 of initial value after 120 s. Half-life of this substance is:

(A) 5 s
(B) 10 s
(C) 20 s
(D) 30 s

Q.50. In a plane EM wave, electric field oscillates at 2 x 10^10 Hz with amplitude 48 V/m. The wavelength of the wave is:

(A) 24 x 10^-10 m
(B) 24 x 10^8 m
(C) 1.5 x 10^8 m
(D) 1.5 x 10^-2 m

CHEMISTRY

SECTION A

Q.51. A mixture of gases contains H2 and O2 gases in ratio 1:4 (w/w). What is the molar ratio of the two gases in the mixture?

(A) 16:1
(B) 2:1
(C) 1:4
(D) 4:1

Q.52. Which of the following statements about hydrogen is incorrect?

(A) Hydronium ion H3O+ exists freely in solution
(B) Dihydrogen does not act as a reducing agent
(C) Hydrogen has three isotopes of which tritium is least common
(D) Hydrogen never acts as cation in ionic salts

Q.53. The angular momentum of electron in 'd' orbital is equal to:

(A) 2*sqrt(3)*h
(B) h
(C) sqrt(6)*h
(D) sqrt(2)*h

Q.54. Which of the following is correct with respect to -I effect of substituents? [R = alkyl]

(A) -NH2 > -OR > -F
(B) -NR2 < -OR < -F
(C) -NH2 < -OR < -F
(D) -NR2 > -OR > -F

Q.55. The species having bond angles of 120 degrees is:

(A) PH3
(B) ClF3
(C) NCl3
(D) BCl3

Q.56. Species Ar, K+ and Ca2+ contain same number of electrons. In which order do their radii increase?

(A) Ca2+ < K+ < Ar
(B) K+ < Ar < Ca2+
(C) Ar < K+ < Ca2+
(D) Ca2+ < Ar < K+

Q.57. Solubility of BaSO4 in water is 2.42 x 10^-3 g/L at 298K. Value of Ksp (molar mass BaSO4 = 233 g/mol) is:

(A) 1.08 x 10^-10 mol^2/L^2
(B) 1.08 x 10^-12 mol^2/L^2
(C) 1.08 x 10^-14 mol^2/L^2
(D) 1.08 x 10^-8 mol^2/L^2

Q.58. Activation energy for a reaction if rate doubles when temperature rises from 20 degrees C to 35 degrees C (R = 8.314 J/mol/K) is:

(A) 342 kJ/mol
(B) 269 kJ/mol
(C) 34.7 kJ/mol
(D) 15.1 kJ/mol

Q.59. Which order of arrangement does NOT agree with the variation of property indicated?

(A) I < Br < Cl < F (increasing electron gain enthalpy)
(B) Li < Na < K < Rb (increasing metallic radius)
(C) Al3+ < Mg2+ < Na+ < F- (increasing ionic size)
(D) B < C < N < O (increasing first ionization enthalpy)

Q.60. Aqueous solution of which compound is the best conductor of electric current?

(A) Hydrochloric acid (HCl)
(B) Ammonia (NH3)

(C) Fructose (C6H12O6)
(D) Acetic acid (C2H4O2)

Q.61. Rate of first-order reaction is 0.04 mol/L/s at 10 s and 0.03 mol/L/s at 20 s. Half-life period of the reaction is:

(A) 44.1 s
(B) 54.1 s
(C) 24.1 s
(D) 34.1 s

Q.62. In acidic medium, H2O2 changes Cr2O7^2- to CrO5 which has two (-O-O-) bonds. Oxidation state of Cr in CrO5 is:

(A) +5
(B) +3
(C) +6
(D) -10

Q.63. The reaction of H2O2 with hydrogen sulphide is an example of which type of reaction?

(A) Addition
(B) Oxidation
(C) Reduction
(D) Redox acidic

Q.64. Which property of colloidal solution is independent of charge on the colloidal particles?

(A) Coagulation
(B) Electrophoresis
(C) Electro-osmosis
(D) Tyndall Effect

Q.65. In context with beryllium, which statement is incorrect?

(A) It is rendered passive by nitric acid
(B) It forms Be2C
(C) Its salts rarely hydrolyze
(D) Its hydride is electron-deficient and polymeric

Q.66. In a button cell: Zn + Ag2O + H2O -> 2Ag + Zn2+ + 2OH-. Half-cell potentials: Zn2+/Zn = -0.76 V; Ag2O/Ag = +0.34 V. Cell potential is:

(A) 1.10 V
(B) 0.42 V
(C) 0.84 V
(D) 1.34 V

Q.67. Correct order of increasing bond length of C-H, C-O, C-C and C=C is:

(A) C-C < C=C < C-O < C-H
(B) C-O < C-H < C-C < C=C
(C) C-H < C-O < C-C < C=C
(D) C-H < C=C < C-O < C-C

Q.68. Which order is correct for bond dissociation enthalpy of halogen molecules?

(A) Br2 > I2 > F2 > Cl2
(B) F2 > Cl2 > Br2 > I2
(C) I2 > Br2 > Cl2 > F2
(D) Cl2 > Br2 > F2 > I2

Q.69. Gadolinium (4f series, atomic number 64). Correct electronic configuration is:

(A) [Xe] 4f^8 6s^2
(B) [Xe] 4f^9 5s^1
(C) [Xe] 4f^7 5d^1 6s^2
(D) [Xe] 4f^6 5d^2 6s^2

Q.70. Propionic acid with Br2/P yields a dibromo product. Its structure would be:

(A) CH2Br-CHBr-COOH
(B) H-C(Br)2-CH2COOH
(C) CH2Br-CH2-COBr
(D) CH3-C(Br)2-COOH

Q.71. At 25 degrees C and 730 mm pressure, 380 mL of dry oxygen collected. At 760 mm (constant temperature), volume would be:

(A) 365 mL
(B) 2 mL
(C) 10 mL
(D) 20 mL

Q.72. CH3CH2-C=CH + HCl --> B. Then B + HI --> C (product of 1-butyne reaction). Product C is:

(A) CH3-CH(Cl)-CH2-CH2I
(B) CH3-CH2-CH2-C(I)(Cl)H
(C) CH3-CH2-CH(I)-CH2Cl
(D) CH3CH2-C(I)(Cl)-CH3

Q.73. Which compounds, on warming with iodine solution and NaOH, will give iodoform? (i) CH3CH2OH (ii) CH3COCH3 (iii) CH3CH(OH)CH3 (iv) CH3OH

(A) (i), (iii) and (iv)
(B) Only (ii)
(C) (i), (ii) and (iii)
(D) (i) and (ii)

Q.74. The appearance of colour in solid alkali metal halides is generally due to:

(A) Interstitial positions
(B) F-centres
(C) Schottky defect
(D) Frenkel defect

Q.75. Solution has 1:4 mole ratio of pentane to hexane. Vapour pressures at 20 degrees C: pentane = 440 mm Hg, hexane = 120 mm Hg. Mole fraction of pentane in vapour phase:

(A) 0.549

(B) 0.200
(C) 0.786
(D) 0.478

Q.76. One mole of Al3+ discharged completely by using charge:

(A) 3F
(B) 1F
(C) 0.3F
(D) 2F

Q.77. In which of the following molecules/ions (BF3, NO2-, NH2-, H2O), is the central atom sp2 hybridised?

(A) NO2- and NH2-
(B) NH2- and H2O
(C) NO2- and H2O
(D) BF3 and NO2-

Q.78. Which one of the following is a free-radical substitution reaction?

(A) Benzyl chloride + AgNO2 -> benzyl nitrite
(B) CH3CHO + HCN -> cyanohydrin
(C) Toluene + Cl2 (boiling) -> benzyl chloride
(D) Benzene + CH3Cl (anhy. AlCl3) -> toluene

Q.79. Ethanol --PBr3--> X --alc.KOH--> Y --(i)H2SO4 room temp, (ii)H2O heat--> Z. Product Z is:

(A) CH3CH2O-CH2-CH3
(B) CH3-CH2-O-SO3H
(C) CH3CH2OH
(D) CH2=CH2

Q.80. Which of the following is an ideal solution?

(A) Ethanol + water
(B) Ethanol + benzene
(C) Nitric acid + water
(D) Benzene + toluene

Q.81. The efficiency of a fuel cell is given by:

(A) DeltaG / DeltaS
(B) DeltaG / DeltaH
(C) DeltaS / DeltaG
(D) DeltaH / DeltaG

Q.82. Which of the following will NOT show cis-trans isomerism?

(A) CH3-CH=CH-CH3
(B) CH3CH2-CH=CH-CH2CH3
(C) CH3-C(CH3)=CH-CH2-CH3
(D) CH3CH-CH=CH-CH2-CH3 (with CH3 branch)

Q.83. Among the following, the compound most reactive towards electrophilic nitration is:

(A) Benzoic acid
(B) Nitrobenzene
(C) Toluene
(D) Benzene

Q.84. At 25 degrees C, dissociation constant of base BOH is 1.0 x 10^-12. Concentration of OH- ions in 0.01 M aqueous solution is:

(A) 2.0 x 10^-6 mol/L
(B) 1.0 x 10^-5 mol/L
(C) 1.0 x 10^-6 mol/L
(D) 1.0 x 10^-7 mol/L

Q.85. Enthalpy change for transition of liquid water to steam is 30 kJ/mol at 27 degrees C. Entropy change for the process is:

(A) 1.0 J/mol/K
(B) 0.1 J/mol/K
(C) 100 J/mol/K
(D) 10 J/mol/K

SECTION B

Q.86. Match: (A) Cyanide process (B) Froth flotation (C) Electrolytic reduction (D) Zone refining with (i) Ultrapure Ge (ii) Dressing of ZnS (iii) Extraction of Al (iv) Extraction of Au (v) Purification of Ni

(A) A-i, B-ii, C-iii, D-iv
(B) A-iii, B-iv, C-v, D-i
(C) A-iv, B-ii, C-iii, D-i
(D) A-ii, B-iii, C-i, D-v

Q.87. Chloramphenicol is an:

(A) Antifertility drug
(B) Antihistaminic
(C) Antiseptic and disinfectant
(D) Antibiotic - broad spectrum

Q.88. Nylon is an example of:

(A) Polyamide
(B) Polythene
(C) Polyester
(D) Polysaccharide

Q.89. C(graphite) + CO2(g) -> 2CO(g). DeltaH = 170 kJ, DeltaS = 170 J/K. Reaction will be spontaneous at:

(A) 710 K
(B) 910 K
(C) 1110 K
(D) 510 K

Q.90. Experimental data for 2A + B2 -> 2AB: [A]=0.50,0.50,1.00; [B]=0.50,1.00,1.00; Rate=1.6x10^-4,3.2x10^-4,3.2x10^-4 M/s. Rate equation is:

(A) rate = k[B2]
(B) rate = k[B2]^2
(C) rate = k[A]^2[B2]^2
(D) rate = k[A]^2[B2]

Q.91. Statement I: SF6 exists but SH6 does not. Statement II: d-p pi bonding cannot take place in SH6.

(A) I incorrect, II true
(B) Both I and II true
(C) Both I and II false
(D) I correct, II false

Q.92. Correct IUPAC name of [Cr(py)3Cl3] is:

(A) Trichlorotripyridinium chromium(III)
(B) Tripyridiniumtrichloro chromium(III)
(C) Trichlorotripyridine chromium(III)
(D) Trichlorotripyridine chromium(II)

Q.93. The incorrect statement among the following is:

(A) Glucose oxidized by Br2/H2O gives gluconic acid
(B) Pentaacetate of glucose does not react with hydroxylamine
(C) Six-membered cyclic structure of glucose is called furanose structure
(D) Two cyclic hemiacetal forms of glucose are anomers

Q.94. How many isomers are possible for [Co(NH3)5(NO2)](NO3)2?

(A) 6
(B) 10
(C) 4
(D) 12

Q.95. Match: (A) Depletion of ozone layer (B) Acid rain (C) Photochemical smog (D) Greenhouse effect with (i) CO2 (ii) NO (iii) SO2 (iv) CFC

(A) A-iii,B-iv,C-i,D-ii
(B) A-ii,B-i,C-iv,D-iii
(C) A-iv,B-iii,C-ii,D-i
(D) A-ii,B-iv,C-i,D-iii

Q.96. Coordination number and oxidation state of [Ni(en)2(C2O4)]NO2:

(A) 6 and 2
(B) 2 and 2
(C) 4 and 3
(D) 6 and 3

Q.97. IUPAC name of final product Z: COOH --SOCl2--> X --NH3--> Y --Br2/KOH--> Z

(A) Aniline
(B) Chlorobenzene

(C) Benzamide

(D) Benzoyl chloride

Q.98. Match: (A) Protein (B) Nucleic acid (C) Polysaccharides (D) Enzymes with (i) DNA (ii) Polymer of alpha-amino acids (iii) glucogen (iv) maltase

(A) A-ii,B-i,C-iii,D-iv

(B) A-i,B-ii,C-iv,D-iii

(C) A-iv,B-iii,C-ii,D-i

(D) A-iii,B-ii,C-iv,D-i

Q.99. Which statement is correct?

(A) [Fe(CN)6]^4- is diamagnetic but [Fe(CN)6]^3- is paramagnetic

(B) Fe3+ ions always form tetrahedral complexes

(C) In octahedral structure, dxy and dyz orbitals of metal ion should be vacant

(D) Ferric ammonium alum is a complex salt

Q.100. The fluoride of xenon with zero dipole moment is:

(A) XeF6

(B) XeO3

(C) XeF4

(D) XeF2

BOTANY

SECTION A

Q.101. Which is less general in characters as compared to genus?

(A) Family

(B) Class

(C) Division

(D) Species

Q.102. Which one is NOT a hot spot of India?

(A) Western Ghats

(B) Aravalli Hills

(C) Indo-Burma

(D) Himalaya

Q.103. A cell organelle containing hydrolytic enzymes is:

(A) Mesosome

(B) Lysosome

(C) Microsome

(D) Ribosome

Q.104. Ovary is half-inferior in the flowers of:

(A) Cucumber

(B) Guava

(C) Plum
(D) Brinjal

Q.105. In which one of the following processes is carbon dioxide NOT released?

(A) Aerobic respiration in animals
(B) Alcoholic fermentation
(C) Lactate fermentation
(D) Aerobic respiration in plants

Q.106. In Bt Cotton, the Bt toxin present in plant tissue as protoxin is converted into active toxin due to:

(A) Alkaline pH of the insect gut
(B) Acidic pH of the insect gut
(C) Action of gut microorganism
(D) Presence of conversion factors in insect gut

Q.107. Which part of oxysome is a peripheral membrane protein containing the site for ATP synthesis?

(A) Headpiece
(B) Base
(C) Stalk
(D) F0-part

Q.108. The parasitic fungus on mustard plant is:

(A) Albugo
(B) Ustilago
(C) Puccinia
(D) Colletotrichum

Q.109. Maturation promoting factor (MPF) is formed by:

(A) G1 Cyclin + cdc 2 Kinase
(B) G2 Cyclin + cdc 1 Kinase
(C) Mitotic Cyclin + cdc 2 Kinase
(D) Mitotic cyclin only

Q.110. Deletion of which domain of ARS would give the least replication rate in eukaryotes?

(A) B1 domain
(B) A domain
(C) B2 domain
(D) B3 domain

Q.111. PGA as the first carbon dioxide fixation product was discovered in photosynthesis of:

(A) Gymnosperm
(B) Angiosperm
(C) Alga
(D) Bryophyte

Q.112. Swiss cheese is ripened with the help of bacterium:

(A) Penicillium roqueforti
(B) Penicillium cambertii
(C) Lactobacillus
(D) Propionibacterium sharmanii

Q.113. The cutting of DNA at specific locations became possible with the discovery of:

(A) Restriction enzymes
(B) Probes
(C) Selectable markers
(D) Ligases

Q.114. Read the following statements and select the incorrect one:

(A) Chloroplast has 70S ribosomes
(B) Nucleolus is not bound by any membrane
(C) RER helps in synthesis of fats and proteins
(D) Lysosome contains hydrolytic enzymes

Q.115. Which of the given characters of pea plants is seen only in pure lines?

(A) Round seeds
(B) Yellow pods
(C) Full Pods
(D) Violet flowers

Q.116. A pair of plants which can prevent both autogamy as well as geitonogamy is:

(A) Cucurbits and coconut
(B) Coconut and papaya
(C) Cucurbits and date palm
(D) Date palm and papaya

Q.117. Statement A: In primary structure of protein, left end = first amino acid, right end = last. Statement B: In polysaccharide chain, right end = reducing end, left = non-reducing end.

(A) Both statements are correct
(B) Both statements are incorrect
(C) A correct, B incorrect
(D) A incorrect, B correct

Q.118. Thermococcus, Methanococcus and Methanobacterium exemplify:

(A) Bacteria with cytoskeleton and ribosomes
(B) Archaebacteria lacking histones like eukaryotes, DNA negatively supercoiled
(C) Archaebacteria containing protein homologous to eukaryotic core histones
(D) Bacteria with relaxed DNA but having cytoskeleton and mitochondria

Q.119. Which of these is exposed on the outer surface of a gram-negative bacterium?

(A) Braun lipoprotein
(B) O-antigen of lipopolysaccharide (LPS)
(C) Polysaccharide portion of lipoteichoic acid (LTA)
(D) Electron transport system components

Q.120. A typical angiosperm anther has 1200 pollen grains. How many pollen mother cells must have been there to produce them?

(A) 200
(B) 400
(C) 300
(D) 600

Q.121. Match microbes with products: A. Aspergillus niger B. Acetobacter aceti C. Clostridium butylicum D. Lactobacillus with i. Lactic acid ii. Butyric acid iii. Acetic acid iv. Citric acid

(A) A-ii,B-iii,C-iv,D-i
(B) A-ii,B-iv,C-iii,D-i
(C) A-iv,B-iii,C-ii,D-i
(D) A-iv,B-i,C-iii,D-ii

Q.122. Which of the following is NOT true for a eukaryotic cell?

(A) Cell wall is made up of peptidoglycan
(B) 80S type ribosomes are present in cytoplasm
(C) Mitochondria contain circular DNA
(D) Membrane bound organelles are present

Q.123. What is the genotypic ratio in test cross for a dihybrid cross if two genes are completely linked?

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

Q.124. An organic non-protein substance bound to an enzyme and essential for its activity is:

(A) Coenzyme
(B) Apoenzyme
(C) Holoenzyme
(D) Isoenzyme

Q.125. Plants which produce characteristic pneumatophores and show vivipary belong to:

(A) Mesophytes
(B) Halophytes
(C) Psammophytes
(D) Hydrophytes

Q.126. In DNA: 5386 nucleotides; Adenine=29%, Guanine=17%, Cytosine=32%, Thymine=17%. Considering Chargaff's rule, it can be concluded that:

(A) It is single stranded linear RNA
(B) It is single stranded linear DNA
(C) It is double stranded linear DNA
(D) It is double stranded circular DNA

Q.127. In genetic engineering, the antibiotics are used:

(A) As selectable markers
(B) To select healthy vectors
(C) As sequences from where replication starts
(D) To keep the culture free of infection

Q.128. Which one of the following organisms is NOT a eukaryote?

(A) Paramecium caudatum
(B) Escherichia coli
(C) Euglena viridis
(D) Amoeba proteus

Q.129. The end products of fermentation are:

(A) CO_2 only
(B) CO_2 and Ethanol only
(C) Ethanol and Oxygen only
(D) Oxygen and Acetaldehyde only

Q.130. The osmotic expansion of a cell kept in water is chiefly regulated by:

(A) Mitochondria
(B) Vacuoles
(C) Plastids
(D) Ribosomes

Q.131. Feedstock for biodiesel can primarily be obtained from:

(A) Nymphaea
(B) Abelmoschus
(C) Triticum
(D) Jatropha

Q.132. Pteridophytes and Bryophytes differ in having:

(A) Spermatozoids
(B) Conducting system
(C) Separate gametophytes
(D) Archegonia

Q.133. Identify RNA type(s) with incorrect function matching: (i) mRNA-template for translation (ii) tRNA-brings polypeptide, reads transcription unit (iii) rRNA-structural and catalytic role during translation

(A) (i) and (ii)
(B) Only (i)
(C) (ii) and (iii)
(D) Only (ii)

Q.134. Which pair is incorrectly matched? (i) Mendel-Father of genetics (ii) Reginald-Punnett square (iii) Walter Sutton & de Vries-Chromosomal theory (iv) Von Tschermak-Linkage in Drosophila

(A) (i) and (ii)
(B) Both (i) and (iii)

(C) Only (ii)
(D) Both (iii) and (iv)

Q.135. The phenomenon of change in colour of algae according to depth in sea is called:

(A) Pasteur's effect
(B) Fogg's effect
(C) Bohr's effect
(D) Gaudikov's effect

SECTION B

Q.136. Specialized epidermal cells surrounding the guard cells are called:

(A) Lenticels
(B) Complementary cells
(C) Subsidiary cells
(D) Bulliform cells

Q.137. Global agreement to reduce the release of ODS (Ozone Depleting Substances) is:

(A) Vienna Convention
(B) Rio de Janeiro Conference
(C) Kyoto Protocol
(D) Montreal Protocol

Q.138. Which component of phloem is made up of sclerenchymatous cells?

(A) Companion cells
(B) Bast fiber
(C) Sieve tubes
(D) Xylem fiber

Q.139. Succession stages that occur in an aquatic habitat are called:

(A) Xerosere
(B) Halosere
(C) Hydrosere
(D) Lithosere

Q.140. The essential element required for water splitting in photosynthesis leading to oxygen evolution is:

(A) Mo
(B) Mn
(C) Mg
(D) K

Q.141. The propagation of large number of plants by tissue culture technique is called:

(A) SCP
(B) Micropropagation
(C) Biofortification
(D) Selective breeding

Q.142. Select the WRONG statement:

(A) Maximum species diversity associated with tropical rain forest
(B) Only biotic factors affect magnitude of primary productivity
(C) Energy flow in an ecosystem is always unidirectional
(D) GFC is major conduit of energy flow in aquatic ecosystem

Q.143. Vascular bundles in monocotyledons are considered closed because:

(A) Xylem is surrounded all around by phloem
(B) A bundle sheath surrounds each bundle
(C) Cambium is absent
(D) There are no vessels with perforations

Q.144. Regarding biological N2-fixation by Rhizobium in soyabean, which statement does NOT hold true?

(A) Nitrogenase may require O2 for its functioning
(B) Nitrogenase is Mo-Fe protein
(C) Leg-haemoglobin is a pink coloured pigment
(D) Nitrogenase converts N2 into two molecules of ammonia

Q.145. Himgiri developed by hybridisation and selection for disease resistance against rust pathogens is a variety of wheat exhibiting:

(A) Multipotency
(B) Unipotency
(C) Pluripotency
(D) Totipotency

Q.146. Select the incorrect statement with respect to gymnosperms:

(A) Gymnosperms are heterosporous
(B) The giant redwood tree Sequoia belongs to gymnosperms
(C) Pattern: spores -> sporangia -> strobili -> sporophylls
(D) Ginkgo and Pinus belong to gymnosperms

Q.147. Fill blanks X and Y: (I) Vascular plants first originated in X period. (II) Lycopods evolved from Zosterophyllum of Y era.

(A) X-Devonian, Y-Palaeozoic
(B) X-Silurian, Y-Palaeozoic
(C) X-Permian, Y-Mesozoic
(D) X-Cretaceous, Y-Cenozoic

Q.148. How many of these codons code for valine? UUA, CUC, AUU, GUA, UCC, CCU, ACA, GUU

(A) 2
(B) 3
(C) 4
(D) 5

Q.149. Cross: tall round (TtRr) x tall wrinkled (Ttrr). Proportions of (A) tall wrinkled and (B) dwarf wrinkled in offspring:

(A) A-37.5%, B-12.5%
(B) A-12.5%, B-12.5%
(C) A-25%, B-50%
(D) A-50%, B-25%

Q.150. E. coli grown in 15N medium then transferred to 14N. After two rounds of replication, CsCl density gradient centrifugation: How many bands in second round?

(A) One
(B) Two
(C) Three
(D) Four

ZOOLOGY

SECTION A

Q.151. Which organism is scientifically correctly named and correctly described?

(A) Musca domestica - common house lizard, a reptile
(B) Plasmodium falciparum - protozoan causing most serious malaria
(C) Felis tigris - Indian tiger in Gir forests
(D) E.coli - full name Entamoeba coli, bacterium in human intestine

Q.152. After childbirth a woman cannot release milk. Which hormone could help in milk ejection?

(A) Prolactin
(B) Pitocin (Oxytocin)
(C) Estrogen
(D) Progesterone

Q.153. Removal of RNA polymerase III from nucleoplasm will affect the synthesis of:

(A) mRNA
(B) rRNA
(C) tRNA
(D) hnRNA

Q.154. Which one is exclusive characteristic of living beings?

(A) Increase in mass from inside
(B) Increase in mass both from outside and inside
(C) Perception of events happening in environment and their memory
(D) Isolated metabolic reactions occurring in vitro

Q.155. Neoplastic transformation may occur as a result of:

(A) Non-ionizing radiation like X-rays
(B) Ionizing radiation like UV-rays
(C) Non-ionizing gamma rays
(D) Both ionizing and non-ionizing radiations

Q.156. Which one is NOT a feature of Adamsia?

(A) Metagenesis
(B) Gastrovascular cavity
(C) Diploblastic
(D) Cnidoblast

Q.157. Uricotelic mode of excreting nitrogenous wastes is found in:

(A) Reptiles and birds
(B) Birds and annelids
(C) Amphibians and reptiles
(D) Insects and amphibians

Q.158. Whose experiments cracked the genetic code and discovered triplet nature?

(A) Nirenberg and Mathaei
(B) Beadle and Tatum
(C) Hershey and Chase
(D) Morgan and Sturtevant

Q.159. Which of the following is a non-medicated IUD?

(A) Lippe's loop
(B) Multiload-375
(C) LNG-20
(D) Progestasert

Q.160. How do parasympathetic neural signals affect the working of the heart?

(A) Reduce both heart rate and cardiac output
(B) Heart rate is increased without affecting cardiac output
(C) Both heart rate and cardiac output increase
(D) Heart rate decreases but cardiac output increases

Q.161. Choose the incorrect statement with respect to blood:

(A) Blood is a fluid connective tissue
(B) It consists of formed elements and plasma
(C) Blood cells and plasma both are responsible for transportation of O_2 and CO_2
(D) Cells of blood form matrix and structural proteins like other connective tissues

Q.162. Most abundant protein in animals is _____ and most abundant protein on Earth is _____ respectively:

(A) RuBisCo and Elastin
(B) Collagen and Elastin
(C) RuBisCo and Collagen
(D) Collagen and RuBisCO

Q.163. C-peptide of human insulin is:

(A) A part of mature insulin molecule
(B) Responsible for its biological activity
(C) Responsible for formation of disulphide bridges
(D) Removed during maturation of proinsulin to insulin

Q.164. Select the taxon which represent both marine and freshwater species:

(A) Echinoderms
(B) Ctenophora
(C) Cephalochordata
(D) Cnidaria

Q.165. In schematic plan of blood circulation: A=?, B=?, C=?, D=? Choose correctly labelled option:

(A) A-pulmonary vein, impure blood, pO2=60 mmHg
(B) B-pulmonary artery, heart to lungs, pO2=90 mmHg
(C) C-vena cava, body to right auricle, pCO2=45 mmHg
(D) D-dorsal aorta, heart to body, pO2=95 mmHg

Q.166. Select the correct match regarding infection and causative agent:

(A) Gonorrhoea - Trichomonas
(B) Genital warts - Treponema
(C) Syphilis - Neisseria
(D) Tetanus - Clostridium

Q.167. What is correct about hormone action in humans?

(A) Glucagon secreted by beta-cells and stimulates glycogenolysis
(B) Secretion of thymosin is stimulated with ageing
(C) In females, FSH first binds with specific receptors on ovarian cell membrane
(D) FSH stimulates secretion of oestrogen and progesterone

Q.168. Select the correct statement:

(A) Morphine extracted from leaves of Cannabis sativa
(B) Chikungunya and amoebic dysentery both transmitted by mosquito
(C) Anti-histamine, adrenaline and steroids quickly reduce symptoms of allergy
(D) T-lymphocytes act like an HIV factory

Q.169. A plover bird and crocodiles have a particular interaction, that is:

(A) Commensalism
(B) Protocooperation
(C) Mutualism
(D) Competition

Q.170. In counter current mechanism, the concentration gradient in the medullary interstitium is mainly maintained by:

(A) HCO_3^- and K^+
(B) NaCl and H_2O
(C) NaCl and urea
(D) K^+ and H^+

Q.171. Which of the following is NOT observed during contraction of a muscle fibre?

(A) A bands retain the length
(B) Shortening of sarcomere
(C) I band gets reduced

(D) H zone retains the length

Q.172. Statement A: Most primitive of all craniates are jawless vertebrates. Statement B: Cyclostomes have paired appendages and sucking circular mouth.

(A) Both statements correct
(B) Both statements incorrect
(C) A correct, B incorrect
(D) A incorrect, B correct

Q.173. In mammalian eye, the 'fovea' is the centre of visual field where:

(A) High density of cones occur but has no rods
(B) The optic nerve leaves the eye
(C) Only rods are present
(D) More rods than cones are found

Q.174. All are functions of Sertoli cells EXCEPT:

(A) Formation of blood testis barrier
(B) Secretion of smegma
(C) Secretes Anti Mullerian Factor
(D) Secretes Androgen Binding Protein

Q.175. Hypothalamic hormones are transported to neurohypophysis through:

(A) Portal vein
(B) Portal artery
(C) Axons
(D) Lymph vessel

Q.176. Lacteals collect lymph from:

(A) Lower limbs
(B) Upper limbs
(C) Gut
(D) Head

Q.177. Choose correct statement regarding HIV transmission:

(A) Drug addicts have least chance of being infected
(B) Repeated blood transfusion recipients: HIV can be transmitted by sharing needles
(C) Contaminated through saliva
(D) Biting through contaminated mosquito

Q.178. Genetic disease transferred from phenotypically normal carrier female to only some male progenies. The disease is:

(A) Autosomal dominant
(B) Autosomal recessive
(C) Sex-linked dominant
(D) Sex-linked recessive

Q.179. Which is correct regarding dilute urine in excretory system?

(A) Nearly 99% of glomerular filtrate is reabsorbed by renal tubules

(B) Ascending limb of loop of Henle is impermeable to electrolytes
(C) Descending limb of loop of Henle is impermeable to water
(D) Distal convoluted tubule is incapable of reabsorbing HCO_3^-

Q.180. Which is correct regarding thrombin?

(A) It is a protein of primary structure
(B) Converts soluble fibrinogen of plasma into insoluble fibrin
(C) Converts insoluble fibrinogen into insoluble fibrin
(D) Converts fibrin into fibrinogen

Q.181. If one kidney is removed, what will be the immediate effect?

(A) The person will die due to lack of urine formation
(B) Uraemia and death
(C) Death due to poisoning
(D) The person may survive

Q.182. Cardiac notch is present in:

(A) Superior lobe of right lung
(B) Inferior lobe of left lung
(C) Superior lobe of left lung
(D) Inferior lobe of right lung

Q.183. The cartilage generally present on long bone terminals is:

(A) Hyaline cartilage
(B) Fibrous cartilage
(C) Hyaline and calcified cartilage
(D) Elastic cartilage

Q.184. Poikilothermic animals having monocondylic skull and amnion belong to the class:

(A) Amphibia
(B) Reptilia
(C) Aves
(D) Mammalia

Q.185. Name the cytokines released in response to virus infection:

(A) Monokines
(B) Lymphokines
(C) Interleukins
(D) Interferons

SECTION B

Q.186. The enzyme that is NOT present in succus entericus is:

(A) Maltase
(B) Nucleases
(C) Nucleosidase
(D) Lipase

Q.187. Which pair is incorrectly matched? (i) Amoeba-Fission (ii) Filamentous algae-Fragmentation (iii) Planaria-Budding (iv) Parrot-True regeneration

(A) (i) and (ii)
(B) Both (i) and (iii)
(C) Only (ii)
(D) Both (iii) and (iv)

Q.188. In Hardy-Weinberg equation, the frequency of heterozygous individual is represented by:

(A) p^2
(B) 2pq
(C) pq
(D) q^2

Q.189. Fructose is absorbed into blood through mucosa cells of intestine by the process called:

(A) Active transport
(B) Facilitated transport
(C) Simple diffusion
(D) Co-transport mechanism

Q.190. Volume of air that will remain in lungs after a normal expiration is:

(A) FRC (Functional Residual Capacity)
(B) VC (Vital Capacity)
(C) ERV (Expiratory Reserve Volume)
(D) IRV (Inspiratory Reserve Volume)

Q.191. In standard ECG of a normal person, the P-wave represents the:

(A) Contraction of both atria
(B) Initiation of the ventricular contraction
(C) Beginning of the systole
(D) End of the systole

Q.192. Statements about origin of life: (i) Earliest organisms were non-green, presumably anaerobes. (ii) First autotrophs were chemoautotrophs that never released oxygen.

(A) (ii) correct, (i) false
(B) Both (i) and (ii) correct
(C) Both (i) and (ii) false
(D) (i) correct, (ii) false

Q.193. MALT is a secondary lymphoid organ in lining of major tracts. MALT stands for:

(A) Metaderm Associated Lymphoid Tissues
(B) Medulla Associated Lymphoid Tissues
(C) Mucosal Associated Lymphoid Tissues
(D) Mucosal Associated Leukemia Tissues

Q.194. The process of becoming human or the development of human race is known as:

(A) Anthropogenesis
(B) Anthropology

(C) Anthropogeny
(D) Paleontology

Q.195. Blood group A donates to P. Blood group B donates to Q. Blood group AB receives from R. Blood group O donates to S. Choose correct P, Q, R, S:

(A) P-A,AB; Q-B,AB; R-AB,A,B,O; S-O
(B) P-A; Q-O,A,B,AB; R-AB,A,B,O; S-A,B
(C) P-O; Q-B,AB; R-A; S-AB,A,B,O
(D) P-O; Q-O,A,B,AB; R-B; S-AB

Q.196. Which synovial joint is incorrectly matched with its position?

(A) Hinge Joint - Knee
(B) Pivot Joint - Between Atlas and Axis
(C) Gliding Joint - Between Carpal bones
(D) Ellipsoid Joint - Between pectoral girdle and head of humerus

Q.197. How many statements are true for sickle-cell anaemia? (i) Sex-linked recessive disease (ii) Glu replaced by Val at 8th position of beta-globin (iii) RBC shape changes to sickle (iv) Beneficial in malarial areas

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

Q.198. In Human Genome Project, sequence of which chromosome was completed in May 2006?

(A) Chromosome X
(B) Chromosome Y
(C) Chromosome 1
(D) Chromosome II

Q.199. Complete the chart: Animalia kingdom - A=level of organisation for radial symmetry; B=symmetry for tissue/organ system level; C=coelom type for pseudocoelomates. Choose A, B, C:

(A) Cellular, Bilateral, Coelomates
(B) Cellular, Asymmetry, Eucoelomates
(C) Cellular, Asymmetry, Enterocoelomate
(D) Schizo cellular, Biradial, Coelomates

Q.200. Match pedigree symbols: (A) diamond shape (B) filled square (C) square-circle connected with children below (D) triangle with two circles below. Options (i) Monozygotic Twins (ii) Heterozygous Male (iii) Sex unspecified (iv) Parents above, children below

(A) A-iii, B-ii, C-iv, D-i
(B) A-iii, B-i, C-ii, D-iv
(C) A-iii, B-i, C-iv, D-ii
(D) A-ii, B-iii, C-iv, D-i

ANSWER KEY — SQP-1

Physics

1. (b)	**2.** (b)	**3.** (b)	**4.** (c)	**5.** (b)	**6.** (c)	**7.** (a)	**8.** (c)
9. (b)	**10.** (b)	**11.** (c)	**12.** (d)	**13.** (c)	**14.** (b)	**15.** (d)	**16.** (c)
17. (b)	**18.** (a)	**19.** (c)	**20.** (a)	**21.** (b)	**22.** (b)	**23.** (b)	**24.** (c)
25. (d)	**26.** (d)	**27.** (c)	**28.** (b)	**29.** (c)	**30.** (c)	**31.** (c)	**32.** (b)
33. (c)	**34.** (d)	**35.** (a)	**36.** (b)	**37.** (a)	**38.** (b)	**39.** (a)	**40.** (b)
41. (b)	**42.** (d)	**43.** (b)	**44.** (b)	**45.** (a)	**46.** (c)	**47.** (d)	**48.** (c)
49. (c)	**50.** (d)						

Chemistry

51. (d)	**52.** (b)	**53.** (c)	**54.** (c)	**55.** (d)	**56.** (a)	**57.** (a)	**58.** (c)
59. (a, d)	**60.** (a)	**61.** (c)	**62.** (c)	**63.** (d)	**64.** (d)	**65.** (c)	**66.** (a)
67. (d)	**68.** (d)	**69.** (c)	**70.** (d)	**71.** (a)	**72.** (d)	**73.** (c)	**74.** (b)
75. (d)	**76.** (a)	**77.** (d)	**78.** (c)	**79.** (c)	**80.** (d)	**81.** (b)	**82.** (c)
83. (c)	**84.** (d)	**85.** (c)	**86.** (c)	**87.** (d)	**88.** (a)	**89.** (c)	**90.** (a)
91. (b)	**92.** (a)	**93.** (c)	**94.** (b)	**95.** (c)	**96.** (d)	**97.** (a)	**98.** (a)
99. (a)	**100.** (c)						

Botany

101. (d)	**102.** (b)	**103.** (b)	**104.** (c)	**105.** (c)	**106.** (a)	**107.** (a)	**108.** (a)
109. (c)	**110.** (b)	**111.** (c)	**112.** (d)	**113.** (a)	**114.** (c)	**115.** (b)	**116.** (d)
117. (a)	**118.** (b)	**119.** (b)	**120.** (c)	**121.** (c)	**122.** (a)	**123.** (b)	**124.** (a)
125. (b)	**126.** (b)	**127.** (a)	**128.** (b)	**129.** (b)	**130.** (b)	**131.** (d)	**132.** (b)
133. (d)	**134.** (d)	**135.** (d)	**136.** (c)	**137.** (d)	**138.** (b)	**139.** (c)	**140.** (b)
141. (b)	**142.** (b)	**143.** (c)	**144.** (a)	**145.** (d)	**146.** (c)	**147.** (b)	**148.** (a)
149. (a)	**150.** (b)						

Zoology

151. (b)	**152.** (a)	**153.** (c)	**154.** (c)	**155.** (d)	**156.** (a)	**157.** (a)	**158.** (a)
159. (a)	**160.** (a)	**161.** (d)	**162.** (d)	**163.** (d)	**164.** (d)	**165.** (c)	**166.** (d)
167. (c)	**168.** (c)	**169.** (b)	**170.** (c)	**171.** (d)	**172.** (c)	**173.** (a)	**174.** (b)
175. (c)	**176.** (c)	**177.** (b)	**178.** (d)	**179.** (a)	**180.** (b)	**181.** (d)	**182.** (c)
183. (a)	**184.** (b)	**185.** (d)	**186.** (b)	**187.** (d)	**188.** (b)	**189.** (b)	**190.** (a)
191. (a)	**192.** (b)	**193.** (c)	**194.** (a)	**195.** (a)	**196.** (d)	**197.** (b)	**198.** (c)
199. (a)	**200.** (a)						