NEW STANDARD ACADEMY

Test Type : 01

Do not open this Test Booklet until you are asked to do so.

04-8-2025

PRE-MEDICAL :11th Undergoing Students

Read carefully the Instructions on the Back Cover of this Test Booklet.

Important Instructions :

1. On the answer sheet, fill in the particulars on Side-1 and Side -2 carefully with blue/black ball point pen only.
2. The test The test is of 3 hours 20 minutes duration and this Test Booklet contains 200 questions. Each question carries 4 marks. For each correct response, the candidate will get 4 marks. For each incorrect response, one mark will be deducted from the total scores. The maximum marks are 720.
3. In this Test Paper, each subject will consist of two sections. Section A will consist of 35 questions (all questions are mandatory) and Section B will have15 questions. Candidate can choose to attempt any 10 question out of these 15 questions. In case if candidate attempts more than 10 questions, first 10 attempted questions will be considered for marking
4. In case of more than one option correct in any question, the best correct option will be considered as answer.
5. Use Blue/Black Ball Point Pen only for writing particulars on this page/marking responses.
6. Rough work is to be done on the space provided for this purpose in the Test Booklet only.
7. On completion of the test, the candidate must hand over the Answer Sheet to the Invigilator before leaving the Room/Hall. The candidates are allowed to take away this Test Booklet with them.
8. The candidates should ensure that the Answer Sheet is not folded. Do not make any stray marks on the Answer Sheet. Do not write your Form No. anywhere else except in the specified space in the Test Booklet/Answer Sheet.
9. Use of white fluid for correction is not permissible on the Answer Sheet.

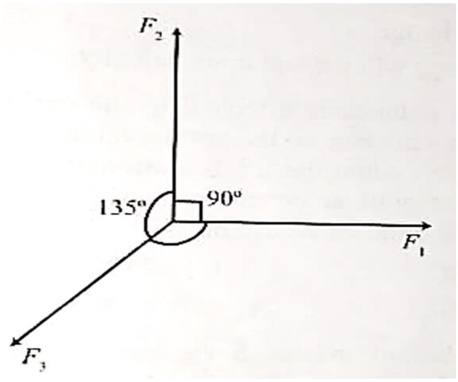
Name of the Candidate(In Capitals) _____

Date of Examintation _____

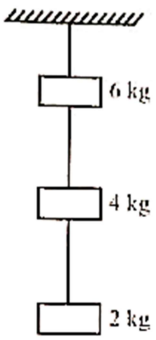
Candidate`s Signature:_____ Invigilator`s Signature: _____

PHYISCS

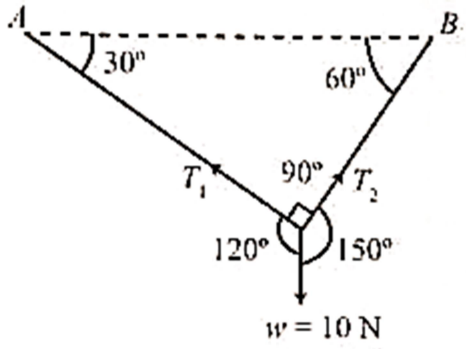
1. When forces F_1 F_2 F_3 are acting on a particle of mass m such that F_2 and F_3 are mutually perpendicular, then the particle remains stationary. If the force F_1 is now removed then the acceleration of the particle is
   (a) F_1 / m (b) $F_2F_3 / m F_1$
   (c) $(F_2 - F_3) / m$ (d) F_2 / m
2. When a force Facts on a body of mass m, the acceleration produced in the body is a. If three equal forces $F_1 = F_2 = F_3$ = Fact on the same body as shown in figure. The acceleration produced is



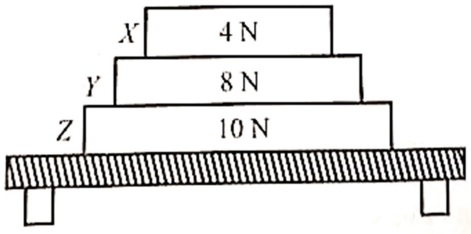
   (a) $(\sqrt{2} - 1)$ a (b) $(\sqrt{2}+ 1)$ a
   (c) $\sqrt{2}$a (d) a
3. An object is resting at the bottom of two strings which are inclined at an angle of 120° with each other. Each string can withstand a tension of 20 N. The maximum weight of the object that can be sustained without breaking the strings is
   (a) 10 N (b) 20 N
   (c) $20\sqrt{2}$ N (d) 40 N
4. Ten coins are placed on top of each other on a horizontal table. If the mass of each coin is 10 g and acceleration due to gravity is 10m s^{-2} what is the magnitude and direction of the force on the 7th coin (counted from the bottom), due to all the coins above it?
   (1) 0.3 N downwards (2) 0.3 N upwards
   (c) 0.7 downwards (d) 0.7 N upwards
5. A 40 N block supported by two ropes. One rope is horizontal and the other makes an angle of 30° with the ceiling. The tension in the rope attached to the ceiling is approximately
   (a) 80 N (b) 40 N
   (c) $40\sqrt{3}$ N (d) $40/\sqrt{3}$ N
6. Three masses of 6 kg, 4 kg and 2 kg are attached to a rigid support as shown in figure. If the string attached to the support breaks and the system falls freely, then the tension in the string connecting 4 kg and 2 kg mass is



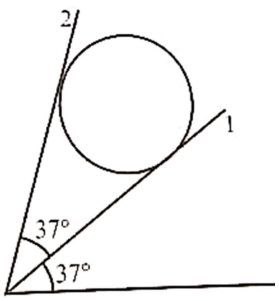
   (a) zero (b) 8 kg wt
   (c) 12 kg wt (d) 6 kg wt
7. A ball of mass 1 kg hangs in equilibrium from a two strings OA and OB as shown in figure. What are the tensions in strings OA and OB? (Take g = 10m /s^2)



   (a) 5N, 5N (b) $5\sqrt{3}$ N ,$5\sqrt{3}$N
   (c) 5 N, $5\sqrt{3}$ N (d) $5\sqrt{3}$, N 5N
8. Three books (X, Y and Z) rest on a table. The weight of each book is indicated. The net force acting on book Y is

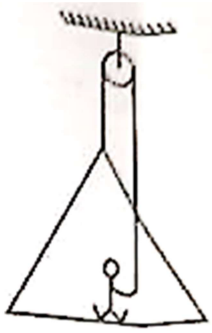


   (a) 4 N down (b) 5 N up
   (c) 9 N down (d) None of these
9. A sphere of mass m is held between two smooth inclined walls. For sin 37° = 3/5 the normal reaction of the wall (2) is equal to



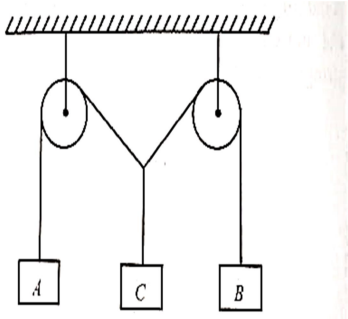
   (a) mg (b) mg sin74°
   (c) mg cos74° (d) None of the above

10. A man of mass 50 kg stands on a frame of mass 30 kg. He pulls on a light rope which passes over a pulley. The other end of the rope is attached to the frame. For the system to be in equilibrium what force man must exert on the rope?



(a) 40 g (b) 80 g
(c) 30 g (d) 50 g

11. Three blocks A, B and C are suspended as shown in figure. Mass of each of blocks A and B is m. If system is in equilibrium, and mass of C is M then if cos < 1.

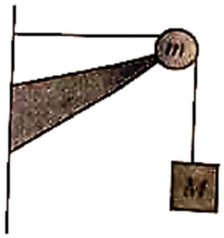


(a) M = 2m (b) M < 2m
(c) M > 2m (d) M <= 2m

12. Five forces inclined at an angle of 72° w.r.t. each other act on a particle of mass m placed at the origin of coordinates. Four forces are of magnitude F_1 and one has a magnitude F_2 Find the resultant acceleration of the particle.
(a) $F_2 - F_1/ m$ (b) Zero
(c) $F_2 + F_1/ m$ (d) $F_2 - 4F_1/ m$

13. A chain of mass M and length L held vertical by fixing its upper end to a rigid support. The tension in the chain at a distance y from the rigid support is
(a) Mg (b) Mg(L - y) / L
(c) MgL/(L-y) (d) Mgy/L

14. A string of negligible mass, going over a clamped pulley of mass m supports a block of mass M as shown in the figure. The force on the pulley by the clamp is given by



(a) (M + m) g
(b) $\sqrt{[(M + m)^2 + M^{25}\,2]}$ g
(c) $\sqrt{M^2 + m^2}$ g
(d) $\sqrt{[(M + m) + m]^2}$ g

15. The tension in the spring is

(a) Zero (b) 5 N
(c) 2.5 N (d) 10 N

16. A mass is hanging on a spring balance which is kept in a lift. The lift ascends with increasing speed. The spring balance will show in its reading
(a) increase (b) decrease
(c) no change
(d) change will depend upon velocity

17. A spring balance is attached to the ceiling of a lift. A man hangs his bag on the spring balance and the balance reads 49 N, when the lift is stationary. If the lift moves downwards with an acceleration of 5 ms^{-2}, the reading of the spring balance would be
(a) 24 N (b) 74 N
(c) 15 N (d) 49 N

18. A lift moves downwards with an acceleration a. A passenger in the lift drops a book. The acceleration of the book with respect to the floor of lift is (assume acceleration due to gravity = g)
(a) g (b) a
(c) g – a (d) g + a

19. Two bodies of masses 5 kg and 3 kg respectively are connected to two ends of a light string passing over frictionless pulley. The tension in the string is (g = 9.8 m/s^2).
(a) 60 N (b) 36.75 Nz
(c) 73.50 N (d) 18 N

20. A 50 kg boy stands on a platform spring scale in a lift that is going down with a constant speed 3 m/s. If the lift is brought to rest by a constant deceleration in a distance of 9 m, what does the scale read during this period? (g = 9.8 m/s^2)
(a) 500 N (b) 465 N
(c) 515 N (d) zero

21. An elevator and its load have a total mass of 800 kg. If the elevator, originally moving downward at 10 m/s, is brought to rest with constant

deceleration in a distance of 25 m, the tension in the supporting cable will be ($g = 10\ m/s^2$).

(a) 8000 N (b) 6400 N
(c) 11200 N (d) 9600 N

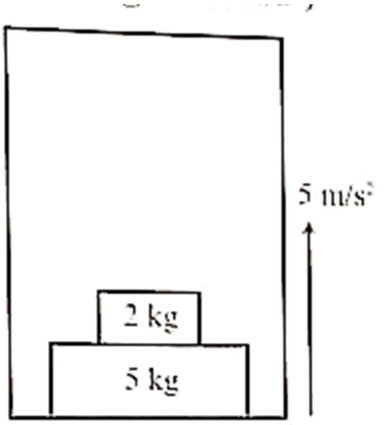
22. A body of mass 2 kg is hung on a spring balance mounted vertically in a lift. If the lift moves up with an acceleration equal to the acceleration due to gravity, the reading on the spring balance will be

(a) 2 kg (b) 1 kg
(c) 3 kg (d) 4 kg

23. A monkey is descending from the branch of a tree with a constant acceleration. If the breaking strength of the branch is 75% of the weight of the monkey,the minimum acceleration with which the monkey should slide down without breaking the branch is

(a) g (b) 3g/4
(c) g/2 (d) g/4

24. Find the force exerted by 5 kg block on floor of lift, as shown in figure. (Take $g = 10m / s^2$)

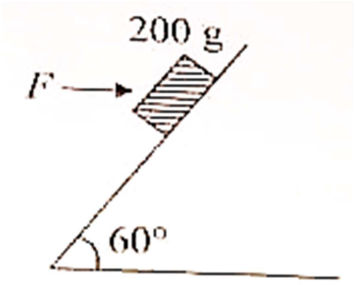


(a) 100 N (b) 115 N
(c) 105 N (d) 135 N

25. A smooth inclined plane of length L, having an inclination θ with horizontal is inside a lift which is moving down with retardation a. The time taken by a block to slide down the inclined plane from rest will be

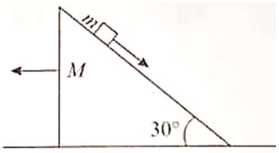
(a) $\frac{2L}{\sqrt{a\sin\theta}}$ (b) $\sqrt{\frac{2L}{g\sin\theta}}$
(c) $\sqrt{\frac{2L}{(g-a)\sin\theta}}$ (d) $\sqrt{\frac{2L}{(g+a)\sin\theta}}$

26. A block of mass 200 g is kept stationary on a smooth inclined plane by applying a minimum horizontal force $F = \sqrt{x}$ N as shown in figure. The value of x is



(a) 4 (b) 24
(c) 12 (d) 8

27. A block of mass m slides on the wooden wedge, which in turn slides backward on the horizontal surface. The acceleration of the block with respect to the wedge is (Given m = 8 kg, M = 16kg) Assume all the surfaces shown in the figure to be frictionless.

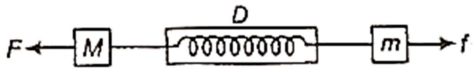


(1) 3/5 g (b) 4/3 g
(c) 6/5 g (d) 2/3 g

28. A toy train consists of three identical compartments X, Y and Z. It is pulled by a constant horizontal force F applied on Z horizontally. Assuming there is negligible friction, the ratio of tension in string connecting XY and YZ is

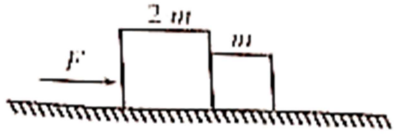
(a) 2:1 (b) 3:2
(c) 1:2 (d) 2:3

29. A dynamometer D is attached to two bodies of masses M = 6 kg and m = 4 kg. Forces F = 20 N and f = 10 N are applied to the masses as shown. The dynamometer reads



(a) 10 N (b) 20 N
(c) 6 N (d) 14 N

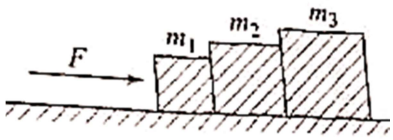
30. Two blocks are in contact on a Motionless table. One has mass m and the other 2 m. A force F is applied on 2 m as shown in the figure. Now the same force F is applied from the right on m. In the two cases the ratio of force of contact between the two blocks will be



(a) same (b) 1:2
(c) 2:1 (d) 1:3

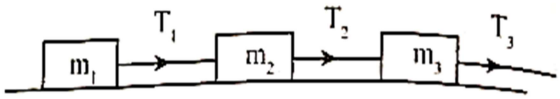
31. Three blocks of masses m_1 = 1kg m_2 = 2kg and m_3 = 3kg are placed in contact on horizontal friction-less surface as shown in figure. A force F = 12N

is applied to mass m_1 as shown. The acceleration of the system is



(a) 12m s^{-2} (b) 6m s^{-2}
(c) 4m s^{-2} (d) 2m s^{-2}

32. Three blocks of masses m_1 m_2 and m_3 connected by. massless strings as shown on frictionless table. They are pulled with a force T_3 = 40N. If m_1 = 10 kg, m_2 = 6 kg and m_3 = 4 kg, the tension T_2 will be

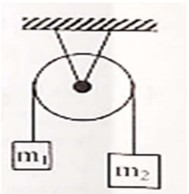


(a) 20 N (b) 40 N
(c) 10N (d) 32 N

33. A block of mass M is pulled along a horizontal frictionless surface by a rope of mass m. If a force F is applied at the free end of the rope, the net force exerted on the block will be
(a) $\frac{FM}{M+m}$) (b) $\frac{Fm}{M+m}$
(c) $\frac{FM}{M-m}$ (d) F

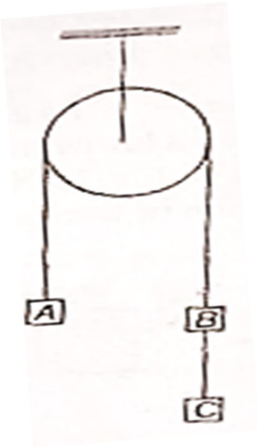
34. A block is pulled along a horizontal frictionless surface by a rope. The tension in the rope will be the same at all points on it
(a) if and only if the rope is not accelerated
(b) if and only if the rope is massless
(c) if either the rope is not accelerated or is massless
(d) always

35. Two masses are hanging vertically over frictionless pulley. The acceleration of the two masses is
($m_2 > m_1$)



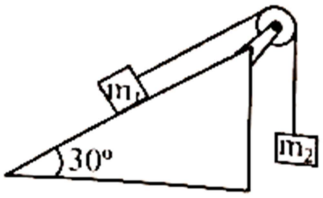
(a) m_1/m_2 g (b) m_2/m_1 g
(c) $\left(\frac{m_2-m_1}{m_1+m_2}\right)$ g (d) $\left(\frac{m_1+m_2}{m_2-m_1}\right)$ g

36. Three equal weights A, B and C of mass 2 kg each are hanging on a string passing over a fixed pulley which is frictionless as shown in figure. The tension in the string connecting weight A and B is?



(a) zero (b) 26 N
(c) 3.3 N (d) 19.6 N

37. A block of mass m_1 = 2 kg on a smooth inclined plane at angle 30° is connected to a second block of mass m_2 = 3 kg by a cord passing over a frictionless pulley as shown in figure. The acceleration of each block is



(a) 2m /sec^2 (b) 4m /sec^2
(c) 6m /sec^2 (d) 8m /sec^2

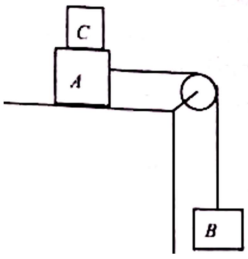
38. The coefficients of static and kinetic friction between a body and the surface are 0.75 and 0.5 respectively. A force is applied to the body to make it just slide with a constant acceleration which is
(a) g/4 (b) g/2
(c) 3g/4 (d) g

39. A body of mass 2 kg rests on a rough inclined plane making an angle 30° with the horizontal. The coefficient of static friction between the block and the plane is 0.7. The frictional force on the block is
(a) 9.8 N (b) $0.7 \times 9.8\sqrt{3}$ N
(c) $9.8\sqrt{3}$ N (d) 0.7×9.8N

40. It is easier to pull a body than to push, because
(a) the coefficient of friction is more in pushing than that in pulling
(b) the friction force is more in pushing than that in pulling
(c) the body does not move forward when pushed
(d) None of these

41. Two masses A and B of 10 kg and 5 kg respectively are connected with a string passing over a frictionless pulley at a corner of a table as shown in the adjoining diagram. The coefficient of friction of A with the table is 0.2. The

minimum mass of C that may be placed on A to prevent it from moving is equal to

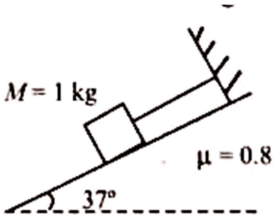


(a) 0 kg (b) 5 kg
(c) 10 kg (d) 15 kg

42. A block is placed on a rough floor and a horizontal force F is applied on it. The force of friction f by the floor on the block is measured for different values of F and a graph is plotted between them
(1) The graph is a straight line of slope 45°
(2) The graph is straight line parallel to the F axis
(3) The graph is a straight line of slope 45° for small F and a straight line parallel to the F-axisfor large F.
(4) There is small kink on the graph
(a) 3, 4 (b) 1, 4
(c) 1, 2 (d) 1, 3

43. Mark the correct statements about the friction between two bodies
(1) static friction is always greater than the kinetic friction
(2) coefficient of static friction is always greater than the coefficient of kinetic friction
(3) limiting friction is always greater than the kinetic friction
(4) limiting friction is never less than static friction
(a) 2, 3, 4 (b) 1, 2, 3
(c) 1, 3, 4 (d) 1, 2, 4

44. For the arrangement shown in figure, the tension in the string to prevent it from sliding down, is



(a) 6 N (b) 6.4 N
(c) 0.4 N (d) None of these

45. A block A of mass 2 kg rests on another block B of mass 8 kg which rests on a horizontal floor. The coefficient of friction between A and B is 0.2 while that between B and floor is 0.5. When a horizontal force of 25 N is applied on the block B. The force of friction between A and B is
(a) Zero (b) 3.9 N
(c) 5.0 N (d) 49 N

CHEMISTRY

46. Which Which compound compoun has all ionic, covalent and
(a) NH_4Cl (b) $K_4[Fe(CN)_6]$
(c) $FeCl_3\ 6H_2O$ (d) All

47. Which hybrid orbitals have highest angle?
(a) sp (b) sp^2
(c) sp^2 (d) sp^3d

48. Electron pair donor in ammonia boron trifluoride addition compound is
(a) N (b) H
(c) F (d) B

49. Hybridisation on the carbon atoms in organic compound $CH_2 = CH - CH = CH_2$ is:
(a) sp^2 hybridisation on all carbon atoms
(b) sp^2 hybridisation on two carbon atoms and sp^3 on another two carbon atoms
(c) sp hybridisation on all the carbon atoms
(d) sp^3 hybridisation on 2 carbon atoms and sp on another 2 carbon atoms

50. Number of sigma and pi bonds in the organic compound $CH \equiv C-C \equiv CH$:
(a) $5\sigma, 4\pi$ (b) $6\sigma, 2\pi$
(b) $2\sigma, 4\pi$ (d) $7\sigma, 2\pi$

51. Correct decreasing order of atomic radius of cations is:
(a) $Li^+ > Na^+ > Mg^{2+} > Be^{2+}$
(b) $B^{2+} > Mg^{2+} > Li^+ > Na^+$
(c) $Na^+ > Li^+ > Mg^{2+} > Be^{2+}$
(d) $Mg^{2+} > Be^{2+} > Li^+ > Na^+$

52. Element of 3rd period and 13th group is
(a) C (b)B
(c) Co (d) Al

53. Elements having outer three orbits in completely filled are called:
(a) inner transition elements
(b) Lanthanides
(c) actinides
(d) All are correct

54. Which element does not have covalent radius?
(a) N (b) He
(c) O (d) P

55. Which element has highest ionisation enthalpy?
(a) Na (b) P
(c) Cl (d) Ar

READ THE STATEMENTS CAREFULLY TO MARK THE CORRECT OPTION OUT OF THE OPTIONS GIVEN BELOW
(a) If both statements are true and Reason is the correct explanation of Assertion.

(b) If both statements are true but Reason is not the correct explanation of Assertion.
(c) If Assertion is true but Reason is false.
(d) If Assertion is false but Reason is true.

56. Assertion (A) bipyramidal. : PCl5 molecule is trigonal
Reason (R) : Hybridisation on P atom is sp^3d.
57. Assertion (A): P- Cl bond lengths in PCI5, is not equal.
Reason (R): P- Cl bonds are of equatorial and axial type.
58. Assertion (A): SF_6, molecule is octahedral.
Reason (R): All S-F bonds are of equal length.
59. Assertion (A): Greater the negative charge on the atom of an element, smaller is the ionic radius.
Reason (R): Effective nuclear charge is decreased.
60. Assertion (A): f-block elements have been placed in separate rows below the periodic table.
Reason (R): There is no proper place for f-block elements inside the periodic table.
61. Hydrogen molecule is formed from two hydrogen atoms. Which of the following is TRUE?
(a) Each hydrogen atom contains one electron in s-orbital.
(b) When two hydrogen atoms approach each other, attractive forces overcome the repulsive forces.
(c) There is decrease in the total energy of the system.
(d) All of the above
62. The most stable overlap is between which of the following?
(a) s and s (b) s and p
(c) p and p
(d) all the overlaps are equally stable
63. Hybridisation is
(a) excitation of electron
(b) mixing and recasting of atomic orbitals
(c) removal of an electron pair
(d) formation of σ-bonds
64. INCORRECT statement about hybridisation is
(a) Atomic orbitals of the same atom undergo hybridization
(b) There should be very little difference in energy involving orbitals
(c) The number of the hybrid orbitals is equal to the number of orbitals involved
(d) The electrons undergo hybridisation and not the orbitals
65. If n s-orbitals and mp-orbitals take part in hybridisation, hybrid orbitals will be obtained.
(a) n + m (b) m-n
(c) m (d) m×n
66. The formation of OH bonds in a water molecule involves overlap.
(a) $s\,p^3 - s$ (b) $s\,p^2$ - s
(c) $sp - p$ (d) $s\,p^3 - p$
67. Which of the following is a WRONG statement?
(a) Aπ bond exists independently.
(b) A double bond is shorter than a single bond.
(c) A sigma bond is stronger than a pi bond.
(d) A double bond is more reactive than a single bond.
68. Two π-bonds exists for the molecule
(a) C_2H_4 (b) C_2H_8
(c) C_2H_2 (d) C_3H_6
69. Without undergoing s p^3 hybridisation, the H-N-H bond in ammonia molecule would have been
(a) 120° (b) 180°
(c) 90° (4) 107° 18'
70. Tetrahedral geometry results due to_____ hybridisation.
(a) sp (b) $s\,p^2$
(c) $s\,p^3$ (d) dsp^2
71. Which is not an exception to octet rule?
(a) BF_3 (b) $SnCl_4$
(c) BeI_2 (4) ClO_2
72. Which of the following pair has electron deficient compounds?
(a) B_2H_6, $AlCl_3$
(b) C_2H_6, Al_2Cl_6
(c) SF_2 , Cl_2O
(d) $NaBH_4$, ICl
73. Born-Haber cycle is mainly used to determine
(a) Lattice energy
(b) Electron affinity
(c) Ionisation energy
(d) Electronegativity
74. Which of the following is not a correct statement about an ionic compound?
(a) The higher the lattice energy, the higher is the melting point.
(b) The higher the dipole moment of solvent, the more is the solubility.
(c) The higher the lattice energy, the more is the solubility.
(d) The more difference in electronegativity, the more is the ionic nature.
75. The electronic configuration of four elements a, b, c and d are:
$a=1s^2$, $b=1s^2, 2s^22p^2$, $c=1s^2\ 2s^22p^5$, $d=1s^2\ 2s^22p^6$
The tendency to form electrovalent bond is greatest in
(a) a (b) b
(c) c (d) d
76. Correct order of bond strength is
(a) C > M > I > CO (b) I >M >C>CO

(c) I >C> CO>M (d) M >I> C>CO

77. Least ionic bond is
(a) P-Cl (b) S-Cl
(c) I-Cl (d) Cl-Cl

78. Which type of bond is not present in HNO_2 molecule?
(a) Covalent (b) Coordinate
(c) lonic (d) Both (a) and (c)

79. The lattice energy of the lithium is in the following order:
(a) LiF > LiCl > LiBr > Lil
(b) LiCl > LiF > LiBr > Lil
(c) LiBr> LiCl > LiF > Lil
(d) Lil > LiBr > LiCl > LiF

80. Pick out the wrong statement.
(a) LiF has less solubility in water than Lil.
(b) Lattice energy of MgO is greater than Na_2O
(c) LiH is more stable than KH.
(d) KO_2 is diamagnetic and colourless.

81. The most covalent halide is
(a) AlF_3 (b) $AlCl_3$
(c) $AlBr_3$ (4) AlI_3

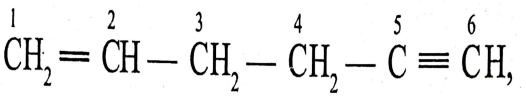
82. The number of coordinate bonds presents in SO_3 molecule are
(a) 1 (b) 2
(c) 3 (d) 4

83. Number of coordinate bonds present in sulphuric acid are
(a) 1 (b) 2
(c) 3 (d) 4

84. Which of the following will be octahedral?
(a) SF_6 (b) BF_4^-
(c) PCl_5 (d) XeF_6

85. sp^3 hybridisation is found in
(A) CH_3^+ (B) CH_3^-
(C) ClO_3^-, (D) SO_3
(a) A and C (b) B and C
(c) B and D (d) C and D

86. In the compound



the C_2- C_3 bond is formed by the overlapping of
(a) sp - sp^2 (b) sp^3 - sp^3
(c) sp - sp^3 (d) sp^2 - sp^3

87. Which order of decreasing bond angle is correct?
(a) $CCl_4 > BF_3 > NO_2^+$
(b) $NH_3 > NCl_3 > NBr_3$
(c) $Br_2O > Cl_2O > OF_2$
(d) $PCl_3, > PBr_3, > PI_3$

88. Shape of a molecule having four bond pairs and two lone pairs of electrons will be
(a) Square planar(b) Tetrahedral
(c) Linear (d) Octahedral

89. A sp^3 hybrid orbital contains
(a) 3/4 s-character (b) 1/4 p-character
(c) 3/4 p-character (d) 1/2 s-character

90. What is the hybridization of carbon in ethane?
(a) sp^3 (b) sp^2
(c) sp (d) sp^3d

BIOLOGY

91. All the members of kingdom Animalia are
(a) Multicellular prokaryote
(b) Unicellular
(c) Multicellular eukaryote
(d) Both unicellular and multicellular eukaryote

92. Cellular level of body organisation is exhibited by phylum
(a) Ctenophora (b) Porifera
(c) Coelenterates (d) Both (b) and (c)

93. Phylum that does not have true coelom is I and the phylum that does not have coelom is II and is triploblastic.
Fill in the blanks I and II with appropriate option:

	I	II
(a)	Platyhelminthes	Ctenophora
(b)	Aschelminthes	Coelenterata
(c)	Aschelminthes	Platyhelminthes
(d)	Platyhelminthes	Coelenterata

94. Metameric segmentation is the characteristic of
(a) Annelida and Arthropoda
(b) Mollusca and Chordata
(c) Platyhelminthes and Arthropoda
(d) Echinodermata and Annelida

95. A radially symmetrical diploblastic animal is
(a) Roundworm (b) Earthworm
(c) Hydra (d) Liver Fluke

96. The cells performing the same function are arranged into
(a) Organ (b) Organ system
(c) Tissue (d) Organism

97. In some animals, the body cavity is not lined by mesoderm, instead, the mesoderm is present as scattered pouches in between the ectoderm and endoderm. The animals possessing this type of body cavity are called
(a) Pseudocoelom (b) Acoelomates
(c) Pseudocoelomates (d) Eucoelomates

98. The cells are arranged as loose cell aggregates in
(a) Platyhelminthes (b) Annelids
(c) Sponges (d) Cnidaria

99. Coelom is cavity between alimentary canal and body wall enclosed by
(a) Ectoderm and endoderm
(b) Mesoderm and ectoderm
(c) Ectoderm on both sides
(d) Mesoderm on both sides

100. What is the arrangement of germinal layers in triploblastic animals from inside to outside?
(a) Ectoderm→ Mesoderm→ Endoderm
(b) Ectoderm →Endoderm→ Mesoderm
(c) Endoderm→ Ectoderm→ Mesoderm
(d) Endoderm→ Mesoderm→ Ectoderm

101. The blood is pumped out of the heart and the cells and tissues are directly bathed in it. This type of blood circulation is found in
(a) Annelida (b) Arthropoda
(c) Chordata (d) Both (a) and (c)

102. An undifferentiated layer, mesoglea, is present in between the
(a) Ectoderm and mesoderm
(b) Mesoderm and endoderm
(c) Ectoderm and endoderm
(d) All of the above

103. Those animals in which the developing embryo has a third germinal layer, mesoderm, in between the ectoderm and endoderm, are called
(a) Triploblastic (b) Diploblastic
(c) Triplocoelomates (d) Diplocoelomates

104. Any plane that passes through the centre does not divide the animal body into equal halves are called_____ animals.
(a) Radially symmetrical
(b) Bilaterally symmetrical
(c) Asymmetrical
(d) None of the above

105. Non-chordates are those animals in which
(a) Notochord is replaced by vertebral column
(b) Notochord is not formed
(c) Notochord is present only in embryonic period
(d) Notochord is present only in tail region

106. Animals in which the body cavity is absent are called
(a) Coelomates (b) Pseudocoelomates
(c) Acoelomates (d) Eucoelomates

107. The skeleton of bath sponge, Euspongia, is made of
(a) Spongin fibres (b) Siliceous spicules
(c) Calcareous spicules (d) All the above

108. An important trait of sponges is that all of them:
(a) Reproduce sexually (b) Contain choanocytes
(c) Contain coelenteron (d) Are herbivorous

109. Symmetry of the sycon is
(a) Bilateral (b) Asymmetrical
(c) Radial (d) Spherical

110. Fill in the blanks:
In sponges, water enters through minute pores...(1)... in the body wall into a central cavity,...(2)..., from where it goes out through the ...(3)...
(a) a-Ostia, b Spongocoel, c- Osculum
(b) b-Ostia, a Spongocoel, c Osculum
(c) a-Ostia, c Spongocoel, b - Osculum
(d) c-Ostia , b Spongocoel, a Osculum

111. Cnidaria is characterized by
(a) Nematosysts
(b) Cnidoblasts
(c) Tissue level of organization
(d) All the above

112. Digestion in Hydra is
(a) Intracellular
(b) Extracellular
(c) First extracellular and then intracellular
(d) First intracellular and then extra cellular

113. The diagram illustrates a Medusa (A) and a Polyp (B).

In which of the following organisms this body form is dominant, respectively?
(a) Adamsia, Hydra (b) Gorgonia, Adamsia
(c) Aurelia, Adamsia (d) Obelia, Hydra

114. Radial symmetry is found in
(a) Earthworm (b) Ctenoplana
(c) Neries (d) Labeo

115. Which of the following is characteristic feature of Ctenophores?
(a) Presence of cnidoblasts
(b) Presence of cilliated combplates
(c) Presence of mesogloca
(d) Presence of amoebocytes

116. Sea-pen is a member of
(a) Porifera (b) Ctenophora
(c) Platyhelminthes (d) Cnidaria

117. In coelenterates, the mouth is present on
(a) Tentacles (b) Osculum
(c) Hypostome (d) Ostia

118. The body form is sessile and cylindrical in
(a) Hydra and Aurelia
(b) Hydra and Adamsia
(c) Hydra and Jelly fish
(d) Obelia and Aurelia

119. Polyp is
(a) Umbrella-shaped and free-swimming
(b) Sessile and cylindrical
(c) Cylindrical and free-swimming
(d) Sessile and umbrella shaped

120. Corals have a skeleton composed of
(a) Magnesium carbonate
(b) Calcium carbonate
(c) Sodium carbonate (d) Bicarbonate

121. Which of the following possess highest regeneration capacity?
(a) Fasciola (b) Taenia
(c) Planaria (d) Pheretima

122. Aschelminthes have complete and straight alimentary canal. Suction of food in them occurs by
(a) Suckers (b) Muscular pharynx
(c) Strobila (d) Rostellum

123. Neural system in Annelida consists of paired ganglia connected by lateral nerves to nerve cord. The nerve cord is/are
(a) Double, ventral and solid
(b) Double, dorsal and hollow
(c) Double, ventral and hollow
(d) Single, ventral and solid

124. Which of the following characters evolved for the first time in phylum Annelida?
(a) Organ system level of body organization
(b) Bilateral symmetry (c) Triploblastic
(d) Metameric segmentation

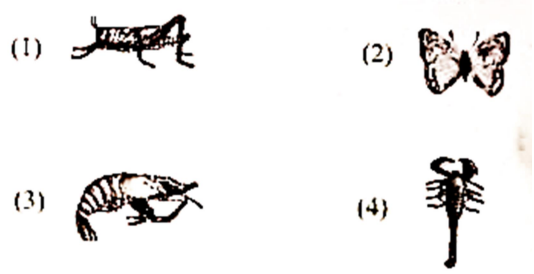
125. Locomotion occurs in earthworm through
(a) Setae (b) Parapodia
(c) Setae and circular muscles
(d) Setae, circular and longitudinal muscles

126. Swimming in Nereis takes place with the help of
(a) Ctenidia (b) Lungs
(c) Gills (d) Parapod ia

127. True coelom appeared first in the course of evolution of
(a) Aschelminthes (b) Chordata
(c) Echinodermata (d) Annelida

128. Wuchereria, Pheretima and Planaria are the member of
(a) Aschelminthes, Platyhelminthes and Annelids respectively
(b) Platyhelminthes, Aschelminthes, and Annelids respectively
(c) Aschelminthes, Annelids, and Platyhelminthes respectively
(d) Platyhelminthes, Annelids and Aschelminthes respectively

129. Which of the following is a gregarious pest?



130. Which is not an exclusive trait of Arthropoda?
(a) Presence of wings (b) Jointed appendages
(c) Coelomate
(d) Chitinous exoskeleton

131. Which of the following is not a useful insect?
(a) Bombyx (b) Apis
(c) Laccifer (d) Aedes

132. Which one is mismatched?
(a) Apis Honey bee
(b) Laccifera-Lac insect
(c) Locusta Gregarious pest
(d) Limulus-Silkworm

133. Statocysts are balancing organs in
(a) Octopus (b) Pila
(c) Aquatic arthropods (d) Ascaris

134. 68. The given animal has

(a) Three pairs of jointed appendages which arise from unsegmented body
(b) Gills for respiration and chitinous exoskeleton
(c) Closed circulatory system
(d) Simple eyes and tissue level of organization

135. The most important economic insect is
(a) Silver fish (b) Desert locust
(c) Bombyx mori (d) Dragon fly

136. The biggest class of animal kingdom is
(a) Arthropoda (b) Insecta
(c) Mammalia (d) Crustacea

137. In Molluscs, the mouth contains a file-like rasping organ for feeding, called
(a) Radula (b) Osphradium
(c) Ctenidium
(d) Aristotle Lantern

138. Which Molluse is called as tusk shell?
(a) Chiton (b) Dentalium
(c) Pila (d) Squid

139. Identify the given animal and choose the incorrect character.

(a) Dioecious
(b) Fertilization is internal
(c) Development is indirect
(d) Adult radially symmetrical

140. Presently hemichordata is a
(a) Subphylum under chordata
(b) Subphylum under non-chordata
(c) Separate phylum under non-chordata
(d) Separate subphylum under protochordata

141. The mantle cavity is the space in between
(a) Muscular foot and visceral hump

(b) Head and muscular foot
(c) Head and visceral hump
(d) Hump and mantle

142. The members of Mollusca are usually
(a) Dioecious and oviparous with direct development
(b) Monoecious and oviparous with indirect development
(c) Dioecious and oviparous with indirect development

(d) Monoecious and viviparous with direct development

143. Which of the following is a defining characteristic of living organism?
(a) Growth
(b) Ability to make sound
(c) Reproduction
(d) Response to external stimuli

144. Metabolism is a feature of:
(a) Living beings(b) Nonliving beings
(c) Both (1) and (2) (d) Virus

145. Process of regeneration is seen in:
(a) Fungi (b) Yeasts
(c) Algae (d) Planaria

146. Self-consciousness is a feature of.
(a) Only human beings (b) All animals
(c) All organisms (d) All plants

147. Which of the following are considered as neither living nor nonliving?
A.Coma patients B. Prions
C. Viroids D. Virions
E. Mycoplasmas F. Ray fungi
(a) A, B, D, and F (b) B, C, E, and F
(c) A, B, C, and D (d) A, B, C, and E

148. Which of the following is not the defining properties of living beings?
(a) Intrinsic growth
(b) Sexual reproduction
(c) Cellular organization
(d) Irritability

149. The most obvious and technically complicated feature of all living organisms is:
(a) Reproduction(b) Growth
(c) Ability to sense their environment
(d) Photosynthesis

150. In vitro, metabolic reactions means:
(a) Reactions that occur in laboratory conditions
(b) Reactions that occur in cell-free system
(c) Both (1) and (2) (d) None of the above

151. Reproduction is synonymous with growth of which group of organisms?
(a) Multicellular filaments organisms
(b) Colonial organisms
(c) Unicellular organisms
(d) All of the above

152. The growth by cell division occurs continuously throughout their life span in:
(a) Majority of lower animals
(b) Higher animals (c) Plants
(d) Only heterotrophic plants

153. Consider the given statements.
A. Nonliving objects grow by increase in mass.
B. Properties of tissue arise as a result of interactions among the constituent cells.
(a) Both (A) and (B) are correct
(b) Only (A) is correct
(c) Only (B) is correct
(d) Both (A) and (B) are incorrect

154. Growth and reproduction are mutually exclusive events for:
(a) Monerans (b) Protists
(c) Plants and few bacteria
(d) Majority of higher plants and animals

155. The defining characteristic of living organisms can be identified as
(a) Growth
(b) Response to external stimuli
(c) Reproduction
(d) Ability to make sound

156. The term systematics refers to:
(a) Identification and classification of organisms
(b) Nomenclature and identification of organisms
(c) Diversity of kinds of organisms and their relationshi
(d) All of the above

157. Bionomial nomenclature was published in
(a) Systema Naturae (b) Genera Plantarium
(c) Genera Animalium (d) Historia Plantarium

158. "Systema Naturae" was written by:
(a) Linnaeus (b) Aristotle
(c) Hippocrates (d) Darwin

159. Basic unit of taxonomy is:
(a) Class (b) Order
(c) Genus (d) Species

160. Which of the following name is correct?
(a) Apis indica
(b) Trypasoma Gambiense
(c) Ficus Bengal (d) Mangifera Indica

161. Systematics is the study of
(a) Diversity amongst groups of organisms
(b) Grouping of organisms
(c) Identification and grouping of organisms
(d) Identification, classification, and taxonomy

162. Founder of binomial nomenclature was:
(a) Linnaeus (b) Mendel
(c) Darwin (d) Lamarck

163. First act in taxonomy is:

(a) Description (b) Identification
(c) Naming (d) Classification

164. Which of the following is a correct name?
(a) Solanum Tuberosum
(b) Solanum tuberosum
(c) Solanum tuberosum linn
(d) All of the above

165. For animals, scientific names are based on agreed principles and criteria, which are provided in:
(a) ICBN (b) ICNB
(c) ICZN (d) ICTV

166. For plants, scientific names are based on agreed principles and criteria that are provided in:
(a) ICBN (b) ICNB
(c) ICZN (d) ICTV

167. Systematics is different from taxonomy in dealing with:
(a) Identification (b) Classification
(c) Phylogeny (d) Nomenclature

168. In binomial nomenclature:
(a) Each name has two components of italics origin
(b) Both words are generally in Latin and written in italics
(c) The first word represents the specific epithet
(d) Name of the author appears after the specific epithet and should be underlined if handwritten

169. The international code of Botanical nomenclature was adopted in:
(a) 1955 (b) 1961
(c) 1964 (d) 1968

170. Taxon "Tiger" represents
(a) Species (b) Genus
(c) Family (d) Glass

171. The suffix phyta indicates.
(a) Family (b) Order
(c) Class (d) Division

172. Panthera is a
(a) Variety (b) Subspecies
(c) Species (d) Genus

173. Mango belongs to class dicotyledonae of angiosperms and belongs to order
(a) Poales (b) Sapindales
(c) Ranales (d) Parietales

174. A group having interbreeding capacity and ability to produce fertile offsprings is:
(a) Community (b) Species
(c) Class (d) Genus

175. Polymoniales is an (category):
(a) Order (b) Class
(c) Division (d) Subclass

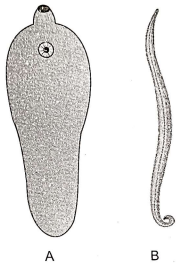
176. Taxonomic category with comparatively less number of common characters is:
(a) Family (b) Order
(c) Genus (d) Variety

177. Choose odd one with respect to obligate categories.
(a) Genus and Family
(b) Family and Order
(c) Tribe and Variety
(d) Order and Class

178. Find out the correct sequence of taxonomic categories in ascending order.
(a) Species→ Family -→ Genus
(b) Kingdom →Class→ Division
(c) Order → Class→ Division
(d) Genus → Class → Orde

179. Which of the following category is not true for wheat?
(a) Poaceae (b) Sapindales
(c) Monocotyledonae (d) Triticum

180. Animal 'A' differs from animal 'B' in having



(a) Triploblastic body (b) Solid mesoderm
(c) Bilateral symmetry
(d) Internal fertilization with indirect development