INVENTORS™ Education Pvt. Ltd.
JEE | NEET | NTSE | KVPY | OLYMPIADS

I-SAT INVENTORS SCHOLARSHIP CUM ABILITY TEST

STREAM [MEDICAL]

[SAMPLE PAPER]

FOR CLASS

11th GOING TO 12th

TIME : 2 Hours | **FULL MARKS : 480**

INSTRUCTIONS

[A] General

1. This Question paper contains FOUR Parts, A, B, C & D (Physics, Chemistry, Botany & Zoology).
2. This Question Paper contains 11 pages including cover page.
3. This question paper contains total 120 questions (Each subject have 30 single correct answer type questions.)
4. The Question Paper has blank spaces at the bottom of each page for rough work. No additional sheets will be provided for rough work.
5. Blank papers, clip boards, log tables, slide rule, calculators, cellular phones, pagers and electronic gadgets, in any form, are NOT allowed.
6. The OMR (Optical Mark Recognition) sheet shall be provided separately.

[B] Answering on the OMR

7. In all the parts, each question will have 4 choices out of which only one choice is correct.
8. Darken the bubble with Ball Pen (Blue or Black) ONLY.

[C] Filling OMR

9. On the OMR sheet, fill all the details properly and completely, otherwise your OMR will not be checked.
10. Do not write anything or tamper the barcode in the registration no. box.

[D] Marking Scheme:

11. For each question you will be awarded 4 marks if you darken the bubble corresponding to the correct answer ONLY and zero (0) marks if no bubble is darkened. In all other cases, minus one (–1) mark will be awarded.

Name :.....

Registration No.: | | | | | | | | | | | | | | |

SECTION – A : PHYSICS

1. Light year is a unit of
(A) Time (B) Mass (C) Distance (D) Energy

2. If *L* and *R* are respectively the inductance and resistance, then the dimensions of $\frac{L}{R}$ will be
(A) $M^0L^0T^{-1}$
(B) M^0LT^0
(C) M^0L^0T
(D) Cannot be represented in terms of M, L and T

3. Dimensional formula for latent heat is
(A) $M^0L^2T^{-2}$ (B) MLT^{-2} (C) ML^2T^{-2} (D) ML^2T^{-1}

4. The dimensions of universal gravitational constant are
(A) $M^{-2}L^2T^{-2}$ (B) $M^{-1}L^3T^{-2}$ (C) $ML^{-1}T^{-1}$ (D) ML^2T^{-2}

5. The frequency of vibration *f* of a mass *m* suspended from a spring of spring constant *K* is given by a relation of this type $f = Cm^xK^y$; where *C* is a dimensionless quantity. The value of *x* and *y* are
(A) $x=\frac{1}{2}, y=\frac{1}{2}$ (B) $x=-\frac{1}{2}, y=-\frac{1}{2}$ (C) $x=\frac{1}{2}, y=-\frac{1}{2}$ (D) $x=-\frac{1}{2}, y=\frac{1}{2}$

6. The quantities *A* and *B* are related by the relation, *m* = *A*/*B*, where *m* is the linear density and *A* is the force. The dimensions of *B* are of
(A) Pressure (B) Work
(C) Latent heat (D) None of these

7. The velocity of water waves *v* may depend upon their wavelength λ, the density of water ρ and the acceleration due to gravity *g*. The method of dimensions gives the relation between these quantities as
(A) $v^2 \propto \lambda g^{-1}\rho^{-1}$ (B) $v^2 \propto g\lambda\rho$ (C) $v^2 \propto g\lambda$ (D) $v^2 \propto g^{-1}\lambda^{-3}$

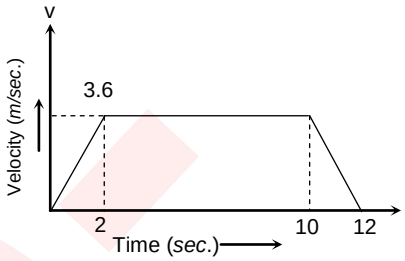
8. The equation of wave is given by $Y = A\sin\omega\left(\frac{x}{v}-k\right)$ where ω is the angular velocity and *v* is the linear velocity. The dimension of *k* is
(A) LT (B) T (C) T^{-1} (D) T^2

9. Dimensional formula for torque is
(A) L^2MT^{-2} (B) $L^{-1}MT^{-2}$ (C) L^2MT^{-3} (D) LMT^{-2}

Space for Rough Work

10. A cube has numerically equal volume and surface area. The volume of such a cube is
(A) 216 units (B) 1000 units (C) 2000 units (D) 3000 units

11. A lift is going up. The variation in the speed of the lift is as given in the graph. What is the height to which the lift takes the passengers



(A) 3.6 *m*
(B) 28.8 *m*
(C) 36.0 *m*
(D) Cannot be calculated from the above graph

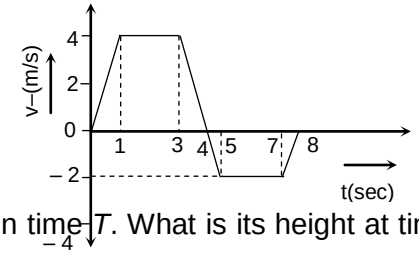
12. A car can be stopped over a distance *x* when its momentum is *p*. what will be the stopping distance when the momentum is 2p
(A) *x* (B) 2x (C) 4x (D) 8x

13. The distance time graph of a particle at time *t* makes angle 45^o with the time axis. After one second, it makes angle 60^o with the time axis. What is the acceleration of the particle
(A) $\sqrt{3}-1$ (B) $\sqrt{3}+1$ (C) $\sqrt{3}$ (D) 1

14. A car accelerates from rest at $5\,ms^{-2}$ and then retards to rest at $3\,ms^{-2}$. The maximum velocity of the car is $30\,ms^{-1}$, what is the distance covered by the car
(A) 150 *m* (B) 240 *m* (C) 300 *m* (D) 360 *m*

15. A ball thrown upwards, returns to the thrower after 4 seconds. Given that $g=10\,ms^{-2}$, with what velocity does it return to the thrower
(A) $10\,ms^{-1}$ (B) $10\sqrt{2}\,ms^{-1}$ (C) $20\,ms^{-1}$ (D) $20\sqrt{2}\,ms^{-1}$

16. The velocity time graph of a body moving in a straight line is shown in figure. Displacement traveled by the body in 8 *sec* be



(A) 18 *m* (B) 16 *m*
(C) 8 *m* (D) 6 *m*

17. A ball dropped from a height *h* reaches the ground in time *T*. What is its height at time T/2
(A) h/8 (B) h/4 (C) h/2 (D) 3h/4

Space for Rough Work

18. The displacement time graph for the two particles *A* and *B* are straight lines inclined at angle of 30^o and 60^o with the time-axis. The ratio of the velocities $V_A : V_B$ will be

(A) 1 : 2 (B) $1:\sqrt{3}$ (C) $\sqrt{3}:1$ (D) 1 : 3

19. If a particle has zero displacement. What is true about its distance

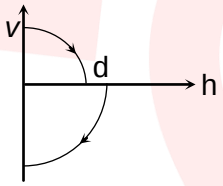
(A) It will be zero (B) It cannot be zero

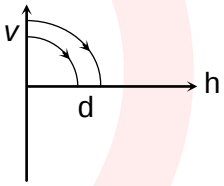
(C) It will be negative (D) It may or may not be zero

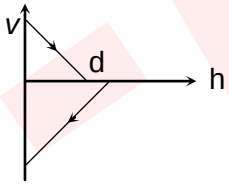
20. A body starts from rest and moves with a uniform acceleration. The ratio of the distance covered in the *n*th sec to the distance covered in *n* sec is

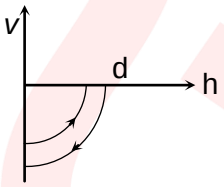
(A) $\frac{1}{n}-\frac{2}{n^2}$ (B) $\frac{1}{n}-\frac{2}{n^2}$ (C) $\frac{2}{n}-\frac{1}{n^2}$ (D) $\frac{2}{n}+\frac{1}{n^2}$

21. A ball is dropped vertically from a height *d* above the ground. It hits the ground and bounces up vertically to a height *d*/2. Neglecting subsequent motion and air resistance, its velocity *v* varies with the height *h* above the ground as

(A) 

(B) 

(C) 

(D) 

22. A train is moving with velocity 20 *m/s*, on this dust is falling at the rate of 50 *kg/minute*. The extra force required to move this train with constant velocity will be

(A) 16.66 *N* (B) 1000 *N* (C) 166.6 *N* (D) 1200 *N*

23. Three weights – W, 2W and 3W, are connected to identical springs suspended from rigid horizontal rod. The assembly of the rod and the weights fall freely. The positions of the weights from the rod are such that

(A) 3 W will be farthest (B) W will be farthest

(C) All will be at the same distance (D) 2W will be farthest

24. A 30 *g* bullet initially travelling at 120 *m/s* penetrates 12 *cm* into a wooden block. The average resistance exerted by the wooden block is

(A) 2850 *N* (B) 2200 *N* (C) 2000 *N* (D) 1800 *N*

Space for Rough Work

25. A man measures time period of a pendulum (T) in stationary lift. If the lift moves upward with acceleration $\frac{g}{4}$, then new time period will be

(A) $\frac{2T}{\sqrt{5}}$ (B) $\frac{\sqrt{5}T}{2}$ (C) $\frac{\sqrt{5}}{2T}$ (D) $\frac{2}{\sqrt{5}T}$

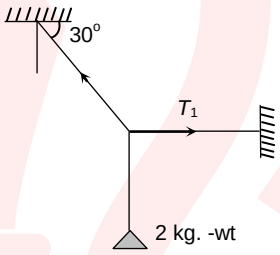
26. A boy whose mass is 50 kg stands on a spring balance inside a lift. The lift starts to ascent with an acceleration of $2ms^{-2}$. The reading of the machine or balance $(g = 10ms^{-2})$ is

(A) 50 *kg* (B) Zero (C) 49 *kg* (D) 60 *kg*

27. A ball of mass 0.5 kg moving with a velocity of $2ms^{-1}$strikes a wall normally and bounces back with the same speed. If the time of contact between the ball and wall is 10^{-3} s, the average force exerted by the wall on the ball is

(A) 1123 *N* (B) 1000 *N* (C) 500 *N* (D) 2000 *N*

28. A body of weight 2 *kg* is suspended as shown in the figure. The tension T_1 in the horizontal string (in *kg* wt) is



(A) $2/\sqrt{3}$

(B) $\sqrt{3}/2$

(C) $2\sqrt{3}$

(D) None of these

29. If a unit vector is represented by $0.5\hat{i} + 0.8\hat{j} + c\hat{k}$, then the value of '*c*' is

(A) 1 (B) $\sqrt{0.11}$ (C) $\sqrt{0.01}$ (D) $\sqrt{0.39}$

30. The component of vector $A = 2\hat{i} + 3\hat{j}$ along the vector $\hat{i} + \hat{j}$ is

(A) $\frac{5}{\sqrt{2}}$ (B) $10\sqrt{2}$ (C) $5\sqrt{2}$ (D) 5

Space for Rough Work

SECTION – B : CHEMISTRY

31. A certain sample of coal contains 1% sulphur by weight. What is the weight of sulphur dioxide produced when 2×10^6 kg of this coal is burnt?
(A) 2×10^4 kg (B) 4×10^4 kg (C) 4×10^5 kg (D) 2×10^5 kg

32. The equation $2Al(s)+\frac{3}{2}O_2(g)\rightarrow Al_2O_3(s)$ shows that
(A) 2 moles of Al react with 3/2 mole of O_2 produce 7/2 mole of Al_2O_3
(B) 2g of Al react with 3/2 litre of O_2 to produce 1 mole of Al_2O_3
(C) 2g mole of Al react with 3/2 litre of O_2 to produce 1 mole of Al_2O_3
(D) 2 moles of Al react with 3/2 mole of O_2 to produce 1 mole of Al_2O_3

33. 10g of carbon burns giving 11.2 litres of CO_2 at NTP. After combustion, the amount of carbon is
(A) 2.5g (B) 4g (C) 3g (D) 1g

34. In a sample of pure compound, Na=0.0887 mole, O=0.132 mole and C=2.65 10^{22} atoms. The empirical formula of the compound is
(A) Na_2CO_3 (B) Na_3O_2
(C) $Na_{0.088}7O_{0.132}C_{2.65\times10}{}^{22}$ (D) NaCO

35. If an iodised salt contains 1% of KI and a person takes 2.5g of the salt every day, the iodide ions going into his or her body every day would be approximately
(A) 7.2×10^{21} (B) 7.2×10^{19} (C) 3.6×10^{21} (D) 9.03×10^{19}

36. Angular momentum of the electron present in the M-shell of hydrogen atom is
(A) $2h/\pi$ (B) h/π (C) $3h/2\pi$ (D) $h/4\pi$

37. In Bohr's model of the atom when an electron jumps from n=1 to n=3, how much energy will be emitted or absorbed ?
(A) 2.15×10^{-11} ergs (B) 0.1911×10^{-10} ergs
(C) 2.389×10^{-12} ergs (D) 0.239×10^{-10} ergs

38. The maximum number of electrons with spin value +1/2 in the orbitals with azimuthal quantum number value l = 4 is
(A) 3 (B) 5 (C) 7 (D) 9

39. The minimum angular momentum of an electron with the magnetic quantum number – 1, 0, +1 is
(A) $\sqrt{3}/2\ h/\pi$ (B) h/π (C) $2h/\pi$ (D) $\frac{3}{2}\frac{h}{\pi}$

Space for Rough Work

40. If n + l value of an orbital is 5, its shape may be
(A) Spherical (B) Dumb-bell
(C) Double dumb-bell (D) Any one of these

41. If air contains N_2 and O_2 in volume ratio 4 : 1 the average vapour density of air is
(A) 18.5 (B) 16.5 (C) 14.4 (D) 29.0

42. The excluded volume of a gas will be larger, if $\frac{T_C}{P_C}$ is:
(A) Small (B) Large (C) Equal to 1 (D) Less than unity

43. If the pressure of a gas contained in a closed vessel is increased by 0.4% when heated by 1°C its initial temperature must be
(A) 250 K (B) 250°C (C) 2500 K (D) 25°C

44. How many moles of He gas occupy 22.4 litres at 30°C and one atmospheric pressure.
(A) 0.9 (B) 1.11 (C) 0.11 (D) 2.11

45. Molar volume of CO_2 is maximum at
(A) STP (B) 0°C, 2 atm (C) 127°C, 1 atm (D) 273°C, 2 atm

46. Which electronic configuration must represent an atom in an excited state ?
(A) $1s^2,2s^2 2p^1$ (B) $1s^2,2s^2 2p^2$ (C) $1s^2,2s^2 2p^2,3p^1$ (D) $1s^2,2s^2 2p^5$

47. The correct order of increasing radius of the elements Si, Al, Na and P is :
(A) Si < Al < P < Na (B) P < Si < Al < Na (C) Al < Si < P < Na (D) Al < P < Si < Na

48. The radius of which ion is closest to that of Li^+ ion ?
(A) Na^+ (B) Be^{2+} (C) Mg^{2+} (D) Al^{3+}

49. The order of ionisation potential between He^+ ion and H-atom (both species are in gaseous state) is :
(A) I.P. (He^+)=I.P.(H) (B) I.P. (He^+)<I.P.(H)
(C) I.P. (He^+)>I.P.(H) (D) Cannot be compared

50. Among the following elements, the highest ionization energy is :
(A) $[Ne]3s^2 3p^1$ (B) $[Ne]3s^2 3p^3$ (C) $[Ne]3s^2 3p^2$ (D) $[Ar]3d^{10}4s^2 4p^3$

51. The amount of energy released on the addition of an electron in outermost shell of an atom is called :
(A) Ionization enthalpy (B) Hydration enthalpy
(C) Electronegativity (D) Electron gain enthalpy

Space for Rough Work

52. In which of the following atom, the attachement of electon is most difficult ?
(A) Radon (B) Nitrogen (C) Oxygen (D) Radium

53. Which of the following represents correct order of electron affinity?
(A) Cl > F > S > O (B) F > O > S > Cl (C) F > Cl > S > O (D) Cl > S > O > F

54. The process requiring absorption of energy is :
(A) $N \rightarrow N^-$ (B) $F \rightarrow F^-$ (C) $Cl \rightarrow Cl^-$ (D) $H \rightarrow H^-$

55. Correct expression of "Alred and Rochow's" scale is :
(A) Electronegativity $= 0.744\frac{Z_{eff}}{r^2} + 0.359$ (B) Electronegativity $= 0.359\frac{r^2}{Z_{eff}} + 0.744$
(C) Electronegativity $= 0.359\frac{Z_{eff}}{r} + 0.744$ (D) Electronegativity $= 0.359\frac{Z_{eff}}{r^2} + 0.744$

56. Amongst sodium halides (NaF, NaCl, NaBr and NaI), NaF has the highest melting point because of :
(A) High oxidising power (B) Lowest polarity
(C) Maximum lattice energy (D) Minimum ionic character

57. The hydration energy of Mg^{2+} ions is lesser than that of :
(A) Al^{3+} (B) Ba^{2+} (C) Na^+ (D) None of these

58. Among the following, which has the maximum hydration energy ?
(A) OH^- (B) NH_4^+ (C) F^- (D) H^+

59. Select the amphoteric substance in the following :
(A) SO_3 (B) NaOH (C) CO_2 (D) $Al(OH)_3$

60. Which of the following compound is most acidic?
(A) Cl_2O_7 (B) P_4O_{10} (C) SO_3 (D) B_2O_3

Space for Rough Work

SECTION – C : BOTANY

61. In unicellular organisms, with respect to growth and reproduction following can be true.

(1) Growth and Reproduction are inclusive events

(2) Unicellular organisms grow by cell division

(3) Both are exclusive

(A) Only 1 correct (B) Only 2 correct

(C) Both 1 and 2 correct (D) Only 3 correct

62. In majority of higher animals and plants, _____ and _____ are mutually exclusive events.

(A) growth; nutrition (B) nutrition; consciousness

(C) growth; reproduction (D) reproduction; consciousness

63. Non-living objects-

(1) Grows from external surface by collecting substance on it.

(2) Grows from internal surface like living

(3) Do not grow at all

Which of the following option is correct?

(A) Only 1 correct (B) Only 2 correct

(C) Only 3 correct (D) All 1, 2, 3 correct

64. In multicellular organisms, _____ refers to the production of progeny possessing features more or less similar to those of parents.

(A) growth (B) reproduction (C) metabolism (D) consciousness

65. Which of following helps bamboo and grasses to elongate?

(A) Apical meristems (B) Lateral meristems

(C) Secondary meristem (D) all meristem

66. Cells of permanent tissues are specialized

(A) functionally (B) only structurally

(C) both structurally and functionally (D) for mitosis

Space for Rough Work

67. The apical meristem of the root is present

(A) in all the roots (B) only in radicals

(C) only in tap roots (D) only in adventitious roots

68. During the formation of leaves and elongation of stem, some cells 'left behind' from the shoot apical meristem, constitute the

(A) lateral meristem (B) intercalary meristem

(C) cork cambium (D) fascicular cambium

69. Which of the following is responsible for the formation of an embryonic shoot called axillary bud?

(A) Lateral meristem (B) Apical meristem

(C) Intercalary meristem (D) Both (B) and (C)

70. Which of the following plant parts elongates directly and leads to the formation of primary roots?

(A) bud (B) radicle (C) plumule (D) root hair

71. The primary roots and its branches constitute the

(A) fibrous root system (B) tap root system

(C) adventitious root system (D) all of the above

72. Fibrous root system is found in

(A) monocotyledonous plants (B) dicotyledonous plants

(C) bryophytes (D) gymnosperms

73. Roots develop from parts of the plant other than radicle are called

(A) tap roots (B) fibrous roots system

(C) adventitious roots (D) nodular roots

74. Root hairs develop from

(A) region of maturation (B) region of elongation

(C) region of meristematic activity (D) root cap

75. The part of the root which is most active in water absorption is called

(A) root cap (B) maturation zone

(C) meristematic zone (D) zone of elongation

Space for Rough Work

76. Fibrous roots develop in maize from
(A) upper nodes (B) lower nodes (C) upper internodes (D) none of these

77. Prop roots of banyan tree are meant for
(A) respiration (B) absorption of water from soil
(C) providing support to big tree (D) all of the above

78. Stilt roots occur in _____ .
(A) groundnut (B) rice (C) sugarcane (D) more than one

79. Membranous extensions in blue green algae are known as
(A) phytochrome (B) chromatophore (C) mesosomc (D) pncumatophore

80. Extension of plasma membrane in prokaryotic cell is
(A) mesosome (B) haploid (C) ribosomes (D) none of these

81. Polysome is a chain of
(A) oxysomes (B) sphaerosomes (C) ribosomes (D) dictyosomes

82. Integral proteins of cell membrane occur on/in
(A) inner surfaces (B) outer surfaces
(C) phospholipid matrix (D) inner and outer surfaces

83. Active transport across biomembrane involves
(A) production of ATP (B) requirement of energy
(C) production of toxin (D) release of energy

84. The membrane of the erythrocytes has approximately
% of proteins and % lipids.
(A) 42, 50 (B) 52, 40 (C) 50, 50 (D) 60, 40

85. The lipid component of the membrane mainly consists of.
(A) Polysaccharides (B) Phosphoglyceride
(C) Inonosaccharaides (D) Both (A) and (C)

86. Golgi apparatus is concerned with
(A) excretion (B) secretion (C) ATP synthesis (D) RNA synthesis

Space for Rough Work

87. Which of the following phase is called the resting phase during which cell is preparing for division by undergoing both cell growth and replication of DNA?

(A) M - phase (B) Prophase (C) G_o phase (D) Interphase

88. Which of the following phase follows S and G phases of interphase?

(A) Prophase (B) Metaphase (C) Anaphase (D) Telophase

89. In mitosis, nucleolus and nuclear membrane completely disappear at

(A) interphase (B) prophase (C) metaphase (D) telophase

90. What is the stage of mitosis in which chromosomes are arranged on the equator of spindle?

(A) Anaphase (B) Prophase (C) Metaphase (D) Telophase

Space for Rough Work

SECTION – C : ZOOLOGY

91. The acidic, basic and neutral amino acids are:

(A) Glutamic acid, valine & lysine (B) Aspartic acid, lysine & glutamate

(C) Glutamic acid, lysine & valine (D) Tryptophan, leucine & lysine

92. Licithin is :

(A) Carbohydrates (B) Protein (C) Fat (D) Phospho lipid

93. Exoskeleton of Arthropodes (insects) are made up of:

(A) Glucosamine (B) Chitin (C) Mucosaccharide (D) Chondrinsulphate

94. Haemoglobin is :

(A) Primary protein (B) Secondary protein

(C) Tertiary protein (D) Quaternary protein

95. Which of the following is not macromolecule

(A) Mucopolysaccharide (B) Triglyceride

(C) Haemoglobin (D) Cellulose

96. Which polysaccharide hold I_2 in its helical structure and give blue colour

(A) Cellulose (B) Starch (C) Cellobiose (D) All of these

97. The complex polysaccharide is

(A) Cellulose (B) Chitin (C) Starch (D) Inulin

98. Which mucopolysaccharide obtain from red algae?

(A) Heparin (B) Caragennin (C) Algenic acid (D) Agar-agar

99. The α-helical structure of protein is maintained by

(A) hydrogen bond (B) covalent bonds (C) ionic bonds (D) hydrophobic bond

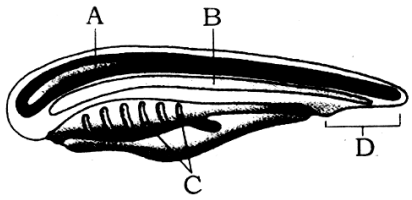
100. Different kinds of amino acid mainly depend upon

(A) side chain/alkyl group (B) amino group & acid group

(C) α-carbon & H (D) amide group & alkyl group

Space for Rough Work

101. Animals belonging to phylum Chordata are fundamentally characterised by the presence of structure noted as A, B, C and D Identify A, B, C and D



(A) A = Notochord, B = Nerve cord, C = Gill slits, D = Post-anal part

(B) A = Nerve cord, B = Notochord, C = Gill slits, D = Post-anal part

(C) A = Nerve cord, B = notochord, C = Post-anal part, D = Gill slits

(D) A = Nerve cord, B = Gill slits, C = Notochord, D = Post-anal part

102. Which one is a link between chordates and nonchordates ?

(A) Sphenodon (B) Balanoglossus (C) Crocodilia (D) None

103. Hemichordates have –

(A) Open type of circulatory system

(B) Respiration ny gill

(C) Proboscis gland/glomerulus as excretory organ

(D) All of these

104. Which of the following is not found in the phylum chordata ?

(A) A dorsal hollow nerve chord

(B) Lateral paired gill slits during development

(C) A notochord at some stage of development

(D) An external skeleton

105. Which of the following is not a characteristic unique to all members of phylum chordata?

(A) A notochord, a dorsal hollow nerve cord (B) A ventral heart

(C) An endoskeleton (D) Vertebrate

106. Which of the following traits is not shared by both the hemichordata and chordata?

(A) Notochord (B) Gills

(C) Bilateral symmetry (D) Coelomate condition

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107. Choose the correct option in respect of characteristics to respective group

	Cyclostomes	**Chondrichthyes**	**Osteichthyes**
(1)	Sucking mouth	Ventral Mouth	Terminal mouth
(2)	Scale absent	Placoid scale	Cycloid/Ctenoid scale
(3)	Marine	Marine	Marine
(4)	6-15 pairs of gills operculum	5-7 pairs of gills without	4 pairs of gills with operculum

(A) 1 and 2 are correct (B) 1 and 4 are correct
(C) All are correct (D) Only 3 is correct

108. Which of the following characters are correct about the Cyclostomata ?
(A) All living members of the class Cyclostomata are ecotoparasites on some fishes
(B) Cranium & Vertebral column are cartilaginous
(C) No fins
(D) All

109. Following are few examples of bony fishes. Find out the marine bony fishes
(A) Flying fish (B) Hippocampus (Sea House)
(C) Both (A) and (B) (D) Labeo (Rohu), Catia, Clarias

110.

Column I	**Column II**
1. Cartilaginous fishes fertilization	p. Usually external
2. Bony fishes	q. internal fertilization
	r. Mostly oviparous
	s. Many are viviparous
	t. Direct development

The correct match between column I and II is
(A) 1-p r t; 2-p, q (B) 1-q, s; 2-p, r, t (C) 1-r, t; 2-p, q, s (D) 1-p, q, t; 2-r, t

111. Which of the following is not a characteristic of class chondrichthyes ?
(A) Gill slits are separate and without operculum
(B) They are predaceous
(C) air bladdes is present
(D) Notochord is persistent throughout the life

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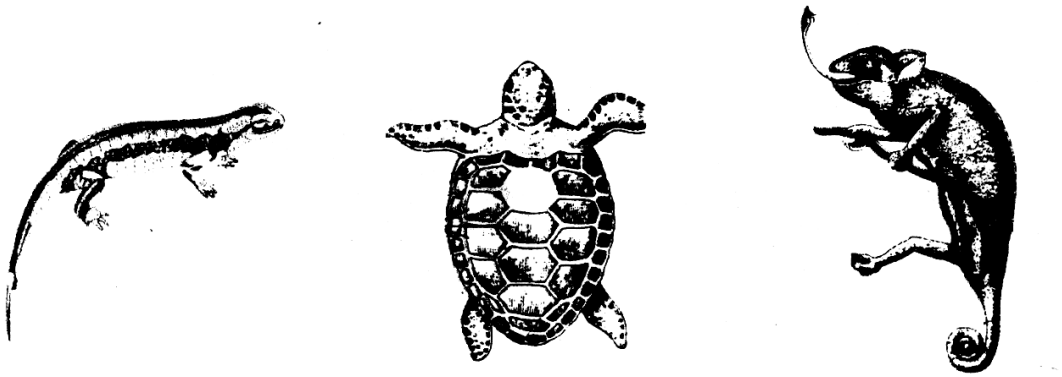
112.



A B C

Which of the following options is correct for name of above animals and their respective classes ?

(A) A = Salamandra, Amphibia, B = Chelone, Reptilia; C = Chameleon, Reptilia

(B) A = Salamandra, Amphibia; B = Chelone, Amphibia; C = Chameleon, Reptilia

(C) A = Salamendra, Amphibia; B = Chelone, Amphibia; C = Chameleon, Amphibia

(D) A = Salamandra, Urochordata; B = Chelone, Cephalochrodata; C = chameleon, Hemichordata

113. Which of the following traits is not characteristic of amphibians?

(A) Moist, scaly, skin

(B) Cloaca

(C) Dioecous, external fertilization oviparous, indirect development

(D) Amniotic egg

114. All are cold blooded animals except

(A) Fishes, Amphibia, reptiles (B) Birds and Animals

(C) Only mammals (D) Only birds

115. Amphibia –

1. Has body – divisible into head and trunk. Tail is present in some amphibia
2. Respiration by gills, Lungs and through skin
3. Has scales in all its mambers
4. Can lead dual life (aquatic and terrestrial)
5. Eye lids present

(A) All are correct (B) 1 and 4 are correct

(C) Only 3 is wrong (D) Only II is wrong

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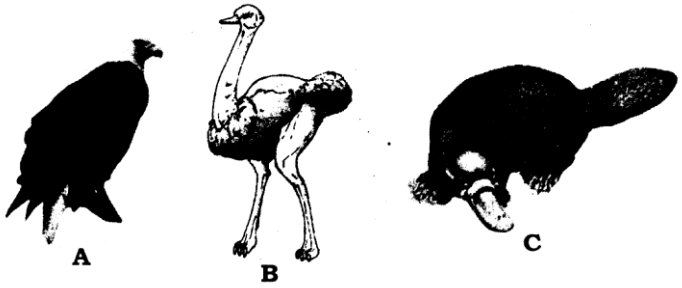
116. Reptiles and Aves (Birds) show similarities in all except
(A) Dioeciously forms (B) Oviparous, internal fertilization
(C) Creeping / Crewing locomotion (D) Direct development

117. Which of the following option is correct for name of below animals and their respective classes ?



(A) A = Neophron, Aves, B = struthio, Aves; C = Omithorhynchus, Mammalia
(B) A = Neophron, Aves, B = Struthio, Mammalia; C = Onithorhynchus, Mammalia
(C) A = Neophron, Aves, B = Struthio, Aves, C = Ornithorhynchus, Aves
(D) A = Neophron, Aves, B = Struthio, Reptilia, C = Omithorhynchus, Mammalia

118. Choose the false option
(A) Most reptilies are terrestrial
(B) Reptiles have 3 or 3.5 chambered heart except crocodile (has 4 chambered heart)
(C) Snakes and lizards shed their skins as skin cast
(D) Reptiles are viviparous

119. 1. Body is covered by dry and cornfield skin, epidermal scales or scutes.
2. They have no external ear
3. Crewing/creeping habit
4. 3 chambered heart
The above characters are associated with
(A) Reptile (B) Bird (C) Amphibia (D) Mammals

120.

Column I	**Column II**
1. Testudo	p. Tortoise
2. Calotes	q. Garden lizard
3. Alligator	r. Wall lizard
4. Hemidactylus	s. Alligator

The correct matching is
(A) 1-p, 2-q, 3-r, 4-s (B) 1-p, 2-q, 3-s, 4-r
(C) 1-q, 3-p, 3-r, 4-s (D) 1-s, 2-r, 3-q, 4-p

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