



# Admission-cum-Scholarship Test

## (Sample Paper)

(For XII-cum-Medical Entrance Exams. 2013)

Test Booklet Code: **A**

**Max.Marks : 400**

1. The initial 10 minutes are earmarked for the candidates to carefully read the instructions. (Note : The candidates are not allowed to either look inside the question booklet or start answering during these initial 10 minutes.)
2. The question booklet and answer sheet are issued separately at the start of the examination.
3. This question booklet contains 100 questions.
4. Read each question carefully.
5. Determine the correct answer, one out of the four available choices given under each question.
6. It is mandatory to use Ball Point Pen to darken to appropriate circle in the answer sheet.
7. For each correct answer, **four** marks will be awarded. For each wrong answer, (1/4) mark will be deducted.

Q. 12 : In the Question Booklet is: Which one of the following is linear in Geometry ?

(1) SO<sub>2</sub>  
 (2) CO<sub>2</sub>  
 (3) NO<sub>2</sub>  
 (4) KO<sub>3</sub>

Q.12. ① ② ③ ④

Thus as the correct answer is choice 2, the candidate should darken completely (with a blue/black Ball point pen only) the circle corresponding to choice 2 against Question No. 12 on the Answer Sheet. If more than one circle is darkened for a given question such answer will be rejected.

8. Do not use white-fluid or any other rubbing material on answer sheet. No change in the answer once marked is allowed. Before handing over the answer sheet to the invigilator, candidate should check that **Roll No.** and **Test-Booklet code** have been filled and marked correctly.
9. Rough work should be done only on the space provided in the question booklet.
10. Immediately after the prescribed examination time is over, the **Answer sheet and Question booklet are to be returned to the invigilator.** If the candidate wants to leave the examination hall before time, he/she should hand over the question paper and answer sheet to the invigilator. However, no student can leave the examination hall before half time.

# PHYSICS

Choose the correct answer :

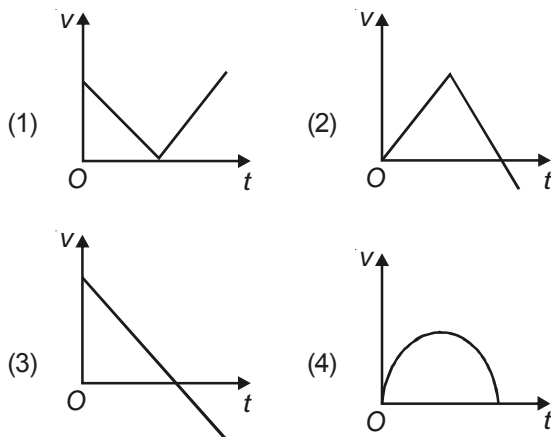
1. The length, breadth and thickness of a block are measured as 125.1 cm, 5.1 cm and 0.81 cm. Which of the following measurement is most precise?

(1) Thickness  
(2) Length  
(3) Breadth  
(4) All have the same preciseness

2. A particle starts moving from rest along a straight line with constant acceleration. If  $S_1$  is the distance travelled by it in first 10 second and  $S_2$  be the distance travelled in the next 5 second then the ratio of  $S_1$  to  $S_2$  will be

(1) 4 : 7                      (2) 4 : 9  
(3) 4 : 5                      (4) 2 : 1

3. A ball is projected from ground vertically upward with a certain velocity. Which of the following curve best represents the variation of velocity of the ball with time?



4. A boy throws a ball from the top of a tower with velocity 20 m/s in horizontal direction. The speed of the ball after 2 second will be nearly

(1) 20 m/s                      (2) 28 m/s  
(3) 40 m/s                      (4) 56 m/s

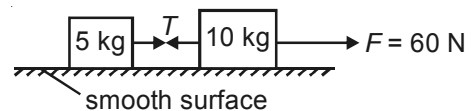
5. For what value of  $\alpha$  the two vectors  $\vec{a} = \hat{i} + 2\hat{j} + \hat{k}$  and  $\vec{b} = 2\hat{j} + \alpha\hat{i} - 10\hat{k}$  are mutually perpendicular?

(1) 4                              (2) 6  
(3) 14                            (4) -6

6. An aeroplane of mass 1000 kg is moving in a circular path of radius 1000 m with speed 720 km/h. The force acting on the aeroplane is

(1) 40 N                              (2) 40 kN  
(3) 80 kN                            (4) 20 kN

7. Two blocks of masses 5 kg and 10 kg are placed on a smooth surface as shown in figure. The tension  $T$  in the string will be



(1) 20 N                              (2) 60 N  
(3) 40 N                            (4) Zero

8. A particle is dropped from a height  $h_0$  on a horizontal floor. The coefficient of restitution between the particle and the floor is 0.5. What is the maximum height after first rebound?

(1)  $\frac{h_0}{2}$                               (2)  $\frac{h_0}{\sqrt{2}}$   
(3)  $\frac{h_0}{4}$                               (4)  $\frac{h_0}{16}$

9. A particle is acted upon by a force  $F = 10$  N which displaces it by 10 m in a direction  $60^\circ$  with the force. The work done by the force will be

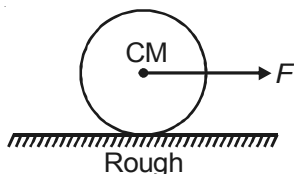
(1) 100 J                              (2) 200 J  
(3) 86.6 J                            (4) 50 J

Space For Rough Work

10. What is the moment of inertia of a disc of mass  $M$  and radius  $R$  about an axis passing through its circumference and parallel to its geometrical axis?

(1)  $\frac{1}{2}MR^2$  (2)  $\frac{3}{2}MR^2$   
 (3)  $MR^2$  (4)  $2MR^2$

11. A solid sphere of mass  $M$  is pulled horizontally on a rough surface as shown in figure and the sphere is in pure rolling. The acceleration of centre of mass of the sphere will be



(1)  $\frac{F}{M}$  (2)  $\frac{2F}{3M}$   
 (3)  $\frac{2F}{5M}$  (4)  $\frac{5F}{7M}$

12. The value of acceleration due to gravity at the surface of earth is  $g$ . What will be value of acceleration due to gravity at a height  $2R$  above the surface of the earth?

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

13. A satellite is orbiting around the earth in an orbit of radius  $r$  with time period  $T$ . If its orbital radius is increased by three times of its initial value, then new time period of the satellite will be

(1)  $4T$  (2)  $3\sqrt{3}T$   
 (3)  $8T$  (4)  $64T$

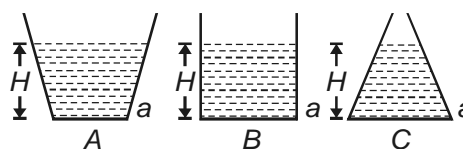
14. When some deforming force is applied on a rod, the elongation in it is  $x$  and energy stored in the rod is  $U$ . If the elongation is increased to  $2x$ , then the energy stored in the rod will be

(1)  $2U$  (2)  $4U$   
 (3)  $3U$  (4)  $9U$

15. The terminal velocity of a steel ball of radius  $r$  in a liquid is  $v$ . If a ball of radius  $1.5r$  of same material is dropped in the same liquid, then the percentage increase in its terminal velocity will be

(1) 25% (2) 50%  
 (3) 125% (4) 300%

16. The three vessels shown in figure have same base area  $a$ . All the vessels are filled with a liquid to the same height  $H$ . The force exerted by the liquid at the base area will be



(1) Minimum in A (2) Minimum in B  
 (3) Minimum in C (4) Equal in all vessels

17. The rms speed of an ideal diatomic gas at room temperature is  $v$ . When temperature is doubled the gas dissociates into atoms. The new value of rms speed will be

(1)  $\sqrt{2}v$  (2)  $2v$   
 (3)  $2\sqrt{2}v$  (4)  $4v$

18. An ideal gas with adiabatic exponent  $\left(i.e., \frac{C_p}{C_v}\right) \gamma$  is heated at constant pressure. It absorbs  $Q$  heat. The value of work done by the gas will be

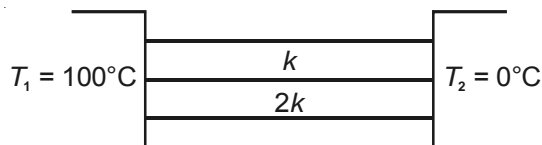
(1)  $\frac{Q}{\gamma}$  (2)  $Q\left(1 - \frac{1}{\gamma}\right)$   
 (3)  $\frac{\gamma Q}{\gamma - 1}$  (4)  $\gamma Q$

19. Which of the following is not a thermodynamic property?

(1) Pressure (2) Volume  
 (3) Heat (4) Temperature

Space For Rough Work

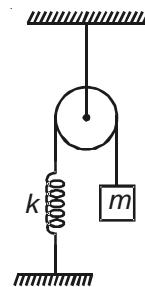
20. Two conductors A and B are connected in parallel as shown in figure. If length of each conductor is  $l$ , area of cross section is  $A$  and thermal conductivities are  $k$  and  $2k$ , the rate of flow of heat through the combination will be



- (1)  $\frac{300 kl}{A}$  (2)  $\frac{300 kA}{l}$   
 (3)  $\frac{200 kA}{l}$  (4)  $\frac{400 kA}{l}$
21. Two solid spheres of same materials are heated to same temperature and are placed in the same surroundings. Their radii are in ratio 1 : 2. The ratio of the rate of cooling of the two spheres will be
- (1) 2 : 1 (2) 1 : 2  
 (3) 1 : 4 (4) 4 : 1
22. A particle is executing SHM with amplitude  $A$  and having maximum velocity  $v_0$ . The velocity of the particle at  $x = \frac{A}{\sqrt{2}}$  will be

- (1)  $\frac{v_0}{2}$  (2)  $\frac{v_0}{\sqrt{2}}$   
 (3)  $\frac{\sqrt{3} v_0}{2}$  (4)  $\frac{v_0}{4}$

23. In the situation shown in figure, the pulley and the spring are massless. The time period of oscillation of the block for small vertical displacement will be



- (1)  $2\pi\sqrt{\frac{m}{4k}}$  (2)  $2\pi\sqrt{\frac{2m}{k}}$   
 (3)  $2\pi\sqrt{\frac{m}{k}}$  (4)  $2\pi\sqrt{\frac{4m}{k}}$
24. If the speed of sound in air at  $0^\circ\text{C}$  is 331 m/s, then the value of speed of sound in air at  $51^\circ\text{C}$  will be nearly
- (1) 310 m/s (2) 335 m/s  
 (3) 360 m/s (4) 400 m/s
25. An organ pipe of effective length 68 cm is closed at one end. If the speed of sound in air at that temperature is  $340 \text{ ms}^{-1}$ , what should be the minimum value of frequency of a tuning fork to obtain resonance ?
- (1) 125 Hz (2) 250 Hz  
 (3) 325 Hz (4) 500 Hz

## CHEMISTRY

26. A vessel contain  $\text{H}_2$  and  $\text{O}_2$  in the molar ratio of 8 : 1 respectively. This mixture of gases is allowed to diffuse through a hole. What will be composition of the mixture coming out of hole?

- (1) 1 : 32 (2) 1 : 16  
 (3) 32 : 1 (4) 16 : 1

27. For one mole gas at low pressure compressibility factor will be

- (1)  $\frac{Pb}{RT} + 1$  (2)  $1 - \frac{a}{RTV}$   
 (3)  $\frac{Pb}{RT} - 1$  (4)  $1 + \frac{a}{RTV}$

28. At which of the following conditions volume of 1 mole gas at 1 bar pressure and  $25^\circ\text{C}$  temperature will be double of the volume of this gas

- (1)  $50^\circ\text{C}$  at 1 bar (2)  $323^\circ\text{C}$  at 1 bar  
 (3)  $25^\circ\text{C}$  and 2 bar (4)  $100^\circ\text{C}$  and 0.5 bar

29. If equal volume of two solution with  $\text{pH} = 5$  and  $\text{pH} = 9$  are mixed together, what will be new  $\text{pH}$  of solution?

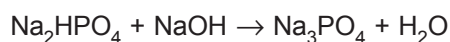
- (1) 4 (2) 14  
 (3) 7 (4) 6

Space For Rough Work

30. Which of the following can show variable covalency because of use of vacant p-orbital?
- (1) B (2) Be  
(3) Both (1) & (2) (4) Si
31. Oxidation of Cr in  $\text{CrO}_5$  is
- (1) +6 (2) +10  
(3) +8 (4) 0
32. Which of the following element is detected by Lassaigne's extract?
- (1) Carbon (2) Oxygen  
(3) Sulphur (4) Hydrogen
33. What would be pH of mixture of 50 ml of 0.1 M  $\text{CH}_3\text{COOH}$  and 50 ml of 0.05 M  $\text{NaOH}$  if ( $\text{pK}_a = 4.74$ )?
- (1) 9.26 (2) 9  
(3) 4.74 (4) 5.74
34. 36 g of metal oxide on reduction give 30 g metal. What should be equivalent mass of metal?
- (1) 36 (2) 40  
(3) 24 (4) 20
35. Masses of equal volume of  $\text{CH}_4$  and a gas X are in ratio of 1 : 5. What would be vapour density of gas X?
- (1) 0.5 (2) 20  
(3) 40 (4) 80
36. What will be volume strength of  $\frac{1}{5}$  N  $\text{H}_2\text{O}_2$ ?
- (1) 1.12 (2) 2.24  
(3) 4.48 (4) 8.96
37. Which of the following will be corresponding to highest wavelength in Hydrogen's atomic spectra?
- (1) 1<sup>st</sup> line of Balmer series  
(2) 1<sup>st</sup> line of Lyman series  
(3) 1<sup>st</sup> line of Paschen series  
(4) 1<sup>st</sup> line of Brackett series
38. What is the correct IUPAC name of
- $$\begin{array}{c} \text{C}_2\text{H}_5-\text{CH}-\text{CH}_3 \\ | \\ \text{CH}_2\text{OH} \end{array} ?$$
- (1) 2-hydroxy methyl Butane  
(2) 2-Ethyl Propane-1-ol  
(3) 2-Methyl Butane-1-ol  
(4) Ethyl, methyl ethanol
39. What would be the number of  $e^-$  with  $m = 0$  in  $\text{Ni}^{2+}$  ion? (At. No. of Ni = 28)
- (1) 12 (2) 14  
(3) 10 (4) 15
40. Which of the following will have highest most negative value of  $e^-$  gain enthalpy?
- (1) Cl (2) F  
(3) Br (4) I
41. What would be shape and geometry of  $\text{SO}_2$ ?
- (1) Trigonal planar and tetrahedral  
(2) Bent shape and trigonal planar  
(3) Linear, linear  
(4) Trigonal planar, pyramidal
42. In which case number of hybrid orbital used by central atom increases?
- (1)  $\text{PCl}_5 \longrightarrow \text{PCl}_4^+$   
(2)  $\text{H}_3\text{BO}_3 \xrightarrow{\text{H}_2\text{O}} [\text{B}(\text{OH})_4]^-$   
(3)  $\text{PCl}_5 \xrightarrow{\text{H}_2\text{O}} \text{POCl}_3$   
(4)  $\text{PCl}_3 \xrightarrow{\text{H}_2\text{O}} \text{H}_3\text{PO}_3$
43. Which of the following is a disproportionation reaction?
- (1)  $\text{CaCO}_3 \xrightarrow{\Delta} \text{CaO} + \text{CO}_2$   
(2)  $\text{CH}_2\text{Cl}-\text{CH}_2\text{Cl} \xrightarrow[\Delta]{\text{Zn dust}} \text{CH}_2 = \text{CH}_2 + \text{ZnCl}_2$   
(3)  $\text{H}_2\text{O} + \text{CH}_3\text{COONa} \longrightarrow \text{CH}_3\text{COOH} + \text{NaOH}$   
(4)  $\begin{array}{c} \text{H} \\ \diagup \\ \text{C} = \text{O} + \text{OH}^- \end{array} \longrightarrow \text{CH}_3-\text{OH} + \text{CH}_3\text{COO}^-$

Space For Rough Work

44. If molecular mass of  $\text{Na}_2\text{HPO}_4$  is M. What will be equivalent mass of  $\text{Na}_2\text{HPO}_4$  in given reaction?



(1)  $\frac{M}{3}$  (2)  $\frac{M}{2}$

(3) 2M (4)  $\frac{M}{1}$

45. Which of the following is a incorrect match of name of enthalpy of reaction?

Reaction	Enthalpy of Process
(1) $\text{CH}_4 + 2\text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$	Heat of Combustion
(2) $\text{C}_{\text{diamond}} + \text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$	Heat of formation
(3) $\text{H}-\text{H} \longrightarrow 2\text{H}$	Bond energy
(4) $\text{NaOH} + \frac{1}{2}\text{H}_2\text{SO}_4 \rightarrow \frac{1}{2}\text{Na}_2\text{SO}_4 + \text{H}_2\text{O}$	Heat of Neutralisation

46. Which of the following has biggest size?

- (1)  $\text{Li}^+_{(\text{aq})}$  (2)  $\text{Na}^+_{(\text{aq})}$   
(3)  $\text{K}^+_{(\text{aq})}$  (4)  $\text{Rb}^+_{(\text{aq})}$

47. Lithium is a substance with lowest reduction potential because

- (1) This is above hydrogen in reactivity series  
(2) Lowest ionisation energy  
(3) Highest heat of hydration  
(4) All of these

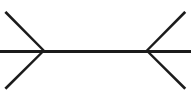



48. Which of the following will form only one product on mono chlorination?

- (1) Neopentane (2) Isopentane  
(3) Isobutane (4) n-butane

49. Which of the following resonating structure must be most stable?

- (1)  $\overset{\oplus}{\text{C}}\text{H}_2 - \text{CH} = \text{CH} - \text{O} - \text{CH}_3$   
(2)  $\text{CH}_2 = \text{CH} - \overset{\oplus}{\text{C}}\text{H} - \text{O} - \text{CH}_3$   
(3)  $\text{CH}_2 = \text{CH} - \text{CH} = \overset{\oplus}{\text{O}} - \text{CH}_3$   
(4) All are equally stable

50. Which of the following can not be prepared from Kolbe's electrolysis?

- (1)  (2)   
(3)  (4) 

## BIOLOGY

51. Family tree of organisms on the basis of taximetrics is called

- (1) Cladogram  
(2) Cryptogram  
(3) Dendrogram  
(4) Monograph

52. According to three kingdom classification, achlorophyllous thallophytes are included in

- (1) Protista  
(2) Plantae  
(3) Fungi  
(4) Metaphyta

53. Backbone of peptidoglycan in bacterial cell wall is made of alternating units of

- (1) NAM and tetrapeptide chain  
(2) NAM and NAG  
(3) NAG and amino acid  
(4) Muramic acid and teichoic acid

54. Which one of the following types of bacterial conjugation leads to sexduction?

- (1)  $\text{Hfr} \times \text{F}^-$  (2)  $\text{Hfr} \times \text{F}^+$   
(3)  $\text{Hfr} \times \text{Hfr}$  (4)  $\text{F}^+ \times \text{F}^-$

**Space For Rough Work**

55. Holophytic protists exhibiting large sap vacuole and primordial utricle are  
 (1) *Noctiluca* and *Thiospirillum*  
 (2) *Melosira* and *Physarum*  
 (3) *Ciliates* and *Sarcodines*  
 (4) *Navicula* and *Melosira*
56. Sexual structure of pigmented moulds are  
 (1) Antheridia and oogonia  
 (2) Spermatangia and carpogonia  
 (3) Ascogonia and antheridia  
 (4) Archegonia and antheridia
57. Special structure in the thallus of lichen which is analogous to the stomata of higher plants is  
 (1) Cyphellae (2) Cephalodia  
 (3) Isidia (4) Soredia
58. Aposporously formed gametophyte in *Funaria* will be  
 (1) Haploid (2) Diploid  
 (3) Triploid (4) Polyploid
59. Actinostele is related to  
 (1) Medullated stele (2) Eustele  
 (3) Dictyostele (4) Nonmedullated stele
60. Megasporophyll of gymnosperm is equivalent to  
 (1) Ovule (2) Carpel  
 (3) Endosperm (4) Embryosac
61. Cell organelle enriched with oxidative enzymes is  
 (1) Golgi bodies (2) Lysosome  
 (3) Mitochondria (4) ER
62. Which one of the following organelles is involved in gluconeogenesis in germinating fatty seeds?  
 (1) Peroxisome (2) Mitochondria  
 (3) Sphaerosomes (4) Glyoxysomes
63. Isobrachial chromosomes are  
 (1) Acrocentric (2) Telocentric  
 (3) Sub-metacentric (4) Metacentric
64. Zygotoc meiosis occurs in  
 (1) Ferns (2) Moss  
 (3) Algae (4) Angiosperms
65. Decision of cell division occurs during  
 (1) G<sub>1</sub>-phase (2) S-phase  
 (3) G<sub>2</sub>-phase (4) M-phase
66. Phragmoplast is associated with  
 (1) Karyokinesis  
 (2) Cytokinesis  
 (3) Cell elongation  
 (4) More than one option is correct
67. Find correct match
- | Column I                         | Column II                      |
|----------------------------------|--------------------------------|
| a. $\overbrace{P}^{\quad} A$     | (i) Fabaceae                   |
| b. $\overbrace{C_{(5)} A_{(5)}}$ | (ii) Solanaceae                |
| c. $C_{1+2+(2)} A_{(9)+1}$       | (iii) Liliaceae                |
| d. $\overbrace{C_{(5)} A_5}$     | (iv) Asteraceae                |
| (1) a(iii), b(iv), c(ii), d(i)   | (2) a(ii), b(iii), c(i), d(iv) |
| (3) a(i), b(iv), c(iii), d(ii)   | (4) a(iii), b(iv), c(i), d(ii) |
68. Inflorescence characterised by fleshy receptacle and trimorphic flowers is  
 (1) Capitulum (2) Hypanthodium  
 (3) Cincinnus (4) Cyathium
69. Find incorrect statement with respect to meristematic tissue  
 (1) Cells are isodiametric without intercellular spaces  
 (2) Absence of ergastic substances  
 (3) Cells have primary wall only  
 (4) Plastids are present

Space For Rough Work



70. Light coloured and physiologically active element of xylem in matured woody dicots is  
 (1) Tracheids  
 (2) Primary xylem vessels  
 (3) Duramen  
 (4) Albumen
71. What is true for plasmolysed cells?  
 (1)  $DPD = OP + TP$  (2)  $DPD = OP - TP$   
 (3)  $OP = TP$  (4)  $\Psi_s = \Psi_p$
72. First balanced culture solution with macronutrients, micronutrients and chelating agent was prepared by  
 (1) Knop (2) Sachs  
 (3) Arnon and Stout (4) Arnon and Hoagland
73. To reduce one  $CO_2$  molecule in sorghum plant, total number of assimilatory powers required is  
 (1) 2  $NADPH_2$  and 3 ATP  
 (2) 2  $NADPH_2$  and 5 ATP  
 (3) 12  $NADPH_2$  and 18 ATP  
 (4) 12  $NADPH_2$  and 30 ATP
74. First decarboxylation in TCA cycle occurs at which substrate level?  
 (1) Pyruvate (2) Oxaloacetate  
 (3) Oxalosuccinate (4)  $\alpha$ -ketoglutarate
75. Pre-harvest fruit drop in tomato is checked by application of  
 (1) NAA (2) IBA  
 (3) NAAM (4) TIBA
76. Which of the following is common ancestral larval form for echinoderms and hemichordates?  
 (1) Dipleura larva (2) Tornaria larva  
 (3) Glochidium larva (4) Ammocoete larva
77. Ecdysone is moulting hormone in insects, which is secreted by  
 (1) Mehlis glands (2) Green gland  
 (3) Uricose gland (4) Prothoracic gland
78. Which of the following is correct digital formula of the hindlimb of frog?  
 (1) 0, 2, 2, 3, 3 (2) 0, 2, 3, 4, 3  
 (3) 2, 2, 3, 4, 3 (4) 2, 2, 2, 3, 4
79. Which larval stage of *Ascaris* is infective?  
 (1) First stage larva (2) Second stage larva  
 (3) Third stage larva (4) Fifth stage larva
80. Which of the following protozoan secretes cellulase enzyme?  
 (1) *Entodinium caudatum*  
 (2) *Entamoeba histolytica*  
 (3) *Elphidium*  
 (4) *Trypanosoma cruzi*
81. Which of the following is not true about chondrichthyes?  
 A. Swim bladder is absent  
 B. Spiral valve occurs in the intestine  
 C. Mouth is ventral  
 D. Strictly oviparous  
 (1) A, B and C (2) A and B  
 (3) A and C (4) D only
82. Which of the following is peptide bond?  
 (1)  $-CO.NH-$  (2)  $-C.O.C-$   
 (3)  $-C.N.C-$  (4)  $-C.O.\overset{\overset{O}{\parallel}}{C}-$
83. Select odd one  
 (1) Glucose (2) Galactose  
 (3) Mannose (4) Fructose
84. Which one of the following is not an essential fatty acid?  
 (1) Oleic acid (2) Linoleic acid  
 (3) Linolenic acid (4) Arachidonic acid
85. Which of the following is the simplest amino acid?  
 (1) Tryptophan (2) Proline  
 (3) Aspartic acid (4) Glycine

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| <p>86. Which of the following enzyme has maximum turnover number?</p> <p>(1) Catalase<br/>(2) Urease<br/>(3) Carbonic anhydrase<br/>(4) Lactate dehydrogenase</p> <p>87. Which one of the following is the strongest cartilage?</p> <p>(1) Hyaline cartilage<br/>(2) Yellow elastic cartilage<br/>(3) White fibrous cartilage<br/>(4) Calcified cartilage</p> <p>88. Which one is the major component of plasma protein?</p> <p>(1) Albumin                      (2) Globulin<br/>(3) Prothrombin                (4) Fibrinogen</p> <p>89. Which one is not absent in axon?</p> <p>(1) Golgi complex            (2) Nissl bodies<br/>(3) Mitochondria            (4) ER</p> <p>90. Monocondylic skull is found in</p> <p>A. Frog                              B. Reptiles<br/>C. Birds                             D. Mammals<br/>(1) A, B and C                (2) A and D<br/>(3) B and C                    (4) B, C and D</p> <p>91. Brunner's glands open into which part of alimentary canal?</p> <p>(1) Stomach<br/>(2) Duodenum<br/>(3) Ileum<br/>(4) Proximal part of colon</p> <p>92. Which of the following is equal to FRC?</p> <p>(1) IRV + TV                    (2) ERV + VC<br/>(3) ERV + RV                (4) ERV + IRV + RV</p> | <p>93. Gull's disease is the result of</p> <p>(1) Hyposecretion of thyroid gland<br/>(2) Hypersecretion of thyroid gland<br/>(3) Hypersecretion of pituitary gland<br/>(4) Hyposecretion of adrenal gland</p> <p>94. Which one of the following valves present between left atrium and left ventricle?</p> <p>(1) Tricuspid valve            (2) Mitral valve<br/>(3) Semilunar valve          (4) Valve of Houston</p> <p>95. Which one of the following are involved in regulation of the kidney function?</p> <p>(1) ADH                            (2) RAAS<br/>(3) ANF                            (4) All of these</p> <p>96. Which one is highly vascularised meninx?</p> <p>(1) Duramater                    (2) Aarchnoidmater<br/>(3) Piamater                      (4) All of these</p> <p>97. Which one is special feature for mammalian brain?</p> <p>(1) Presence of optic lobe<br/>(2) Presence of hypothalamus<br/>(3) Presence of corpus callosum<br/>(4) Presence of hollow olfactory lobes</p> <p>98. Select the longest cranial nerve supplying to thoracic as well as abdominal parts</p> <p>(1) Trigeminal nerve          (2) Pathetic nerve<br/>(3) Vagus nerve                (4) Facial nerve</p> <p>99. Organ of Corti rests upon</p> <p>(1) Reissner's membrane<br/>(2) Basilar membrane<br/>(3) Choroid layer<br/>(4) Membranous labyrinth</p> <p>100. Which of the following endocrine gland is ecto-mesodermal origin?</p> <p>(1) Pituitary gland              (2) Thyroid gland<br/>(3) Adrenal gland                (4) Gonads</p> |
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## Admission-cum-Scholarship Test

(Sample Paper)

(For XII-cum-Medical Entrance Exams. 2013)

### Answers

- |         |         |         |         |          |
|---------|---------|---------|---------|----------|
| 1. (1)  | 21. (1) | 41. (2) | 61. (3) | 81. (4)  |
| 2. (3)  | 22. (2) | 42. (2) | 62. (4) | 82. (1)  |
| 3. (3)  | 23. (3) | 43. (4) | 63. (4) | 83. (4)  |
| 4. (2)  | 24. (3) | 44. (4) | 64. (3) | 84. (1)  |
| 5. (2)  | 25. (1) | 45. (2) | 65. (1) | 85. (4)  |
| 6. (2)  | 26. (3) | 46. (1) | 66. (2) | 86. (3)  |
| 7. (1)  | 27. (2) | 47. (3) | 67. (4) | 87. (3)  |
| 8. (3)  | 28. (2) | 48. (1) | 68. (2) | 88. (1)  |
| 9. (4)  | 29. (3) | 49. (3) | 69. (4) | 89. (3)  |
| 10. (2) | 30. (3) | 50. (2) | 70. (4) | 90. (3)  |
| 11. (4) | 31. (1) | 51. (3) | 71. (1) | 91. (2)  |
| 12. (4) | 32. (3) | 52. (1) | 72. (4) | 92. (3)  |
| 13. (3) | 33. (3) | 53. (2) | 73. (2) | 93. (1)  |
| 14. (2) | 34. (2) | 54. (4) | 74. (3) | 94. (2)  |
| 15. (3) | 35. (3) | 55. (4) | 75. (1) | 95. (4)  |
| 16. (4) | 36. (1) | 56. (3) | 76. (1) | 96. (3)  |
| 17. (2) | 37. (4) | 57. (1) | 77. (4) | 97. (3)  |
| 18. (2) | 38. (3) | 58. (2) | 78. (3) | 98. (3)  |
| 19. (3) | 39. (1) | 59. (4) | 79. (2) | 99. (2)  |
| 20. (2) | 40. (1) | 60. (2) | 80. (1) | 100. (3) |