# PART - I

## IQ (MENTAL ABILITY)

This section contains **20 multiple choice questions**. Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

**1.** 125 smaller but identical cubes are put together to form a large cube. A knife is passed through one side AB of top face ABCD to the diagonally opposite edge of the bottom face. The knife is then again passed through the side CD of top face to the diagonally opposite edge of the bottom face. How many of the smaller cubes are not cut by the knife at all?

(1) 25 (2) 50 (3) 70 (4) 80

**2.** From the positions shown below of a cube, which letter will be on the face opposite to the face A?

A. 

B. 

C. 

D. 


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

**3.** The time in the clock is 4 : 46, what is the mirror image?

(1) 7 : 14 (2) 8 : 14

(3) 8 : 24 (4) None of these

**Direction:** Given two statements are followed by two conclusions numbered I and II. Read the statements and give the answer.

**4.** **Statements:**

(A) Some phones are watches.

(B) All watches are cats.

**Conclusions:**

I. All cats are watches.

II. Some cats are phones.

(1) If only conclusion I follows

(2) If only conclusion II follows

(3) If either I or II follow

(4) If both I and II follow

**5.** Sanjay is 10 ranks ahead of Amit in a class of 50. If Amit's rank is 15$^{th}$ from the last, what is Sanjay's rank from the start.

(1) 24$^{th}$ (2) 25$^{th}$ (3) 26$^{th}$ (4) 23$^{rd}$

**Direction:** Given two statements are followed by two conclusions numbered I and II. Read the statements and give answer.

**6.** **Statements:**

(A) Some pots are thin.

(B) No thin is tall.

**Conclusions:**

I. Some pots are tall.

II. Some pots are not tall.

(1) If only conclusion I follows

(2) If only conclusion II follows

(3) If either I or II follow

(4) If both I and II follow

**7.** If the next date after 3$^{rd}$ Monday in a month is 16$^{th}$, what will be the date on day before 5$^{th}$ Monday?

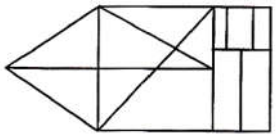
(1) 27 (2) 28

(3) 29 (4) 30

**8.** If Z = 52 and ACT = 48, then BAT will be equal to

(1) 39 (2) 41 (3) 44 (4) 46

**9.** How many triangles are there in the following figure?



(1) 12 (2) 13 (3) 15 (4) 14

**10.** Introducing a man to her husband a woman said, "His brother's father is the only son of my grandfather". How is the woman related to the man?

(1) Aunt (2) Mother

(3) Daughter (4) Sister

**11.** If the third day of a month is Monday, which of the following will be the fifth day from 21st of the month?

(1) Monday (2) Tuesday

(3) Wednesday (4) Thursday

**12.** Find the missing term: 840, 168, 42, 14, 7, ?

(1) 7 (2) 1 (3) –14 (4) –28

**13.** A clock shows the time as 5:30 PM. If the minute hand gains 4 minute every hour, how many minutes will the clock gains by 6 AM?

(1) 48 min (2) 49 min

(3) 50 min (4) None of these

**14.** Pointing to a man receiving a trophy at a prize distribution Raju said, "He is the brother of my uncle's daughter". Who is the man to Raju?

(1) Son (2) Brother-in-law

(3) Uncle (4) Cousin

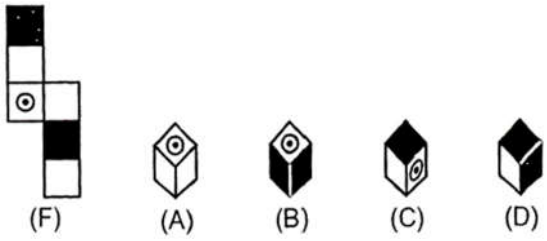
**15.** From his house, Nanak went 15 km North. Then he turned West and covered 10 kms. Then he turned South and covered 5 kms. Finally, turning to East, he covered 10 kms. In which direction is he from his house?

(1) East (2) West (3) North (4) South

**16.** In a certain code language 'de bom' means 'lovely flower', 'poc til de' means 'flower and fruit', 'pere xax bom' means 'lovely green pasture' and 'poc xas' means 'green fruit'. Which word in that language means 'pasture'?

(1) pere (2) bom (3) poc (4) de

**17.** Choose the box that is similar to the box formed from the given sheet of paper (F).




(1) (B) & (C) only

(2) (A), (C) and (D) only

(3) (B) & (D) only

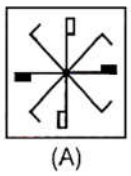
(4) (A) and (D) only

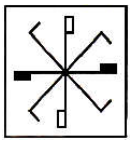
**18.** A cube is painted blue on all faces and divided into 125 smaller cubes of equal size. How many cubes are painted on three faces?

(1) 7 (2) 8

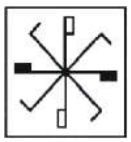
(3) 9 (4) 10

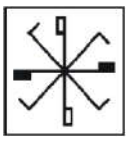
**19.** **Direction:** In the following question, a figure marked (A) is followed by four figures (1), (2), (3) and (4) which show the possible water-images of the figure (A). Choose one out of these four figures, which shows the correct water-image of the figure (A) in each case.


(A)

(1) 

(2) 

(3) 

(4) 

**20.** A vagabond runs out of cigarettes. He searches for the stubs, having learnt that 7 stubs can make a new cigarette, good enough to be smoked, he gathers 49 stubs. If he smokes 1 cigarettes every three-quarter of an hour how long will his supply last?

(1) 5.25 hrs (2) 6 hrs

(3) 4.5 hrs (4) 3 hrs

# PART-II

## SECTION-A : PHYSICS

This section contains **20 Multiple Choice Questions.** Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

**21.** A projectile has initially the same horizontal velocity as it would acquire if it had moved from rest with uniform acceleration of $3m/s^2$ for 0.5 min. If the maximum height reached by it is 80 m, then the angle of projection with horizontal is ($g = 10\ m/s^2$)

(1) $\tan^{-1}\left(\frac{1}{3}\right)$ (2) $\tan^{-1}\left(\frac{3}{2}\right)$

(3) $\tan^{-1}\left(\frac{4}{9}\right)$ (4) $\sin^{-1}\left(\frac{4}{9}\right)$

**22.** The range of projectile when launched at angle $\theta$ is same as when launched at angle $2\theta$. What is the value of $\theta$ ?

(1) $15^o$ (2) $30^o$ (3) $45^o$ (4) $60^o$

**23.** Three identical metal balls each of radius r are placed touching each other on a horizontal surface such that an equilateral triangle is formed with centres of three balls joined. The centre of mass of the system is located at :

(1) horizontal surface

(2) centre of one of the balls.

(3) line joining the centres of any two balls.

(4) point of intersection of the medians.

**24.** A body constrained to move in y - direction is subjected to a force given by

$\vec{F} = -2\hat{i} + 15\hat{j} + 6\hat{k},\ N$

the work done by this force in moving the body a distance of 10 m along the y-axis is :

(1) 20 j (2) 150 J (3) 160 J (4) 190 J

**25.** The mass of a liquid flowing per second per unit area of cross section of a tube is proportional to $p^x$ and $\upsilon^y$, where p is the pressure difference and $\upsilon$ is the velocity. Then, the relation between x and y is

(1) x = y (2) $x = -y$

(3) $2y = x^2$ (4) $2y = -x^2$

**26.** Pushing force making an angle $\theta$ to the horizontal is applied on a block of weight w placed on a horizontal table. If the angle of friction be $\phi$, the magnitude of force required to move the body is equal to :

(1) $\frac{w\cos\phi}{\cos(\theta+\phi)}$ (2) $\frac{w\sin\phi}{\cos(\theta+\phi)}$

(3) $\frac{w\tan\phi}{\sin(\theta+\phi)}$ (4) $\frac{w\sin\phi}{\tan(\theta+\phi)}$

**27.** A mass of 1 kg is suspended by a thread. It is

(i) lifted up with an acceleration $4.9\ m/s^2$.

(ii) lowered with an acceleration $4.9\ m/s^2$.

The ratio of the tension in the thread in 1st and 2nd cases :

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

**28.** A stationary particle explodes into two particles of masses $m_1$ and $m_2$ which move in opposite directions with velocities $\upsilon_1$ and $\upsilon_2$. The ratio of their kinetic energies $E_1/E_2$ is

(1) 1 (2) $\frac{m_1V_2}{m_2V_1}$ (3) $\frac{m_2}{m_1}$ (4) $\frac{m_1}{m_2}$

**29.** Which one of the following is the dimension of the coefficient of friction ?

(1) $[M^2L^2T]$ (2) $[M^\circ L^\circ T^\circ]$

(3) $[ML^2T^{-2}]$ (4) $[M^2L^2T^{-2}]$

**30.** A block of mass 10 kg is placed on a rough horizontal surface having coefficient of friction $\mu = 0.5$. If a horizontal force of 100 N is applied on it, then the acceleration of block will be

(1) $15\ m/s^2$ (2) $10\ m/s^2$ (3) $5\ m/s^2$ (4) $0.5\ m/s^2$

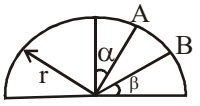
**31.** A particle moves from rest at A on the surface of a smooth circular cylinder of radius r as shown. At B it leaves the cylinder. The equation relating $\alpha$ and $\beta$ is

(1) $3\sin\alpha = 2\cos\beta$

(2) $2\sin\alpha = 3\cos\beta$

(3) $3\sin\beta = 2\cos\alpha$

(4) $2\sin\beta = 3\cos\alpha$



**32.** A rod is of length 3 m and its mass per unit length is directly proportional to the distance x from its one end. The centre of mass of rod from that end will be at :

(1) 1.5 m (2) 2 m

(3) 2.5 m (4) 3.0 m

**33.** A car of mass m is driven with acceleration a along a straight level road against constant external resistance R. When the velocity is $\upsilon$, the power of the engine is :

(1) $(R-ma)\upsilon$ (2) $(R+ma)\upsilon$

(3) $ma\upsilon$ (4) $R\upsilon$

**34.** A ball is thrown vertically upwards with a velocity of 10 m/s. It returns to the ground with a velocity of 9 m/s. If g = 9.8 m/s$^2$, then the maximum height attained by the ball is nearly (assume air resistance to be uniform) :

(1) 5.1 m (2) 4.1 m

(3) 4.61 m (4) 5.0 m

**35.** A container has a small hole at its bottom. Area of cross section of the hole is $A_1$ and that of the container is $A_2$. Liquid is poured in the container at a constant rate Q m$^3$/s. The maximum level of liquid in the container will be :

(1) $\frac{Q^2}{2gA_1A_2}$ (2) $\frac{Q^2}{2gA_1^2}$

(3) $\frac{Q^2}{gA_1A_2}$ (4) $\frac{Q}{gA_1A_2^2}$

**36.** Toy cart tied to the end of an unstretched spring of length a, when revolved moves in horizontal circle of radius 2a with a time period T. Now the toy cart is speeded up till it moves in a horizontal circle of radius 3a with a period T'. If Hook's law hold then :

(1) $T'=\sqrt{\frac{3}{2}}T$ (2) $T'=\frac{\sqrt{3}}{2}T$

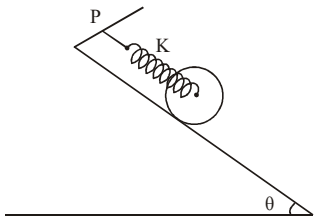
(3) $T'=\frac{3}{2}T$ (4) T' = T

**37.** A force $\vec{F}=a\hat{i}+3\hat{j}+6\hat{k}$ is acting at a point $\vec{r}=2\hat{i}-6\hat{j}-12\hat{k}$. The value of a for which angular momentum is conserved is :

(1) Zero (2) 1

(3) –1 (4) 2

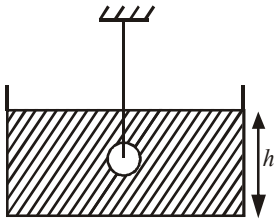
**38.** A uniform cylinder of mass M and radius R rolls without slipping down a slope of angle $\theta$ to the horizontal. The cylinder is connected to a spring of spring constant K. While the other end of the spring is connected to a rigid support at P. The cylinder is released when the spring is unstretched. The maximum distance that the cylinder travels is :




(1) $\frac{3}{4}\frac{Mg\tan\theta}{K}$ (2) $\frac{Mg\tan\theta}{K}$

(3) $\frac{2Mg\sin\theta}{K}$ (4) $\frac{4Mg\sin\theta}{3K}$

**39.** A solid sphere connected by a string is dipped in a liquid of density $\rho$ as shown in figure. The pressure at the bottom of the vessel will be, ($P_0$ = atmosphericpressure).




(1) $P = P_0 + \rho gh$

(2) $P > P_0 + \rho gh$

(3) $P < P_0 + \rho gh$

(4) $P_0$

**40.** Let $a_r$ and $a_t$ represent radial and tangential acceleration respectively. The motion of a particle may be circular if :

(1) $a_r = 0, a_t = 0$

(2) $a_r = 0, a_t \neq 0$

(3) $a_r \neq 0, a_t = 0$

(4) none of these

## SECTION-B : CHEMISTRY

This section contains **20 Multiple Choice Questions.** Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

**41.** In which of the following transitions of electron will the wavelength of emitted radiation be minimum?

(1) n = 6 to n = 4

(2) n = 4 to n = 2

(3) n = 3 to n = 1

(4) n = 2 to n = 1

**42.** If the ionic radii of $K^+$ and $F^-$ are nearly the same (i.e. 1.34Å), the atomic radii of K and F are respectively.

(1) 1.34 Å and 1.34 Å

(2) 0.72 Å and 1.96Å

(3) 1.96 Å and 0.72 Å

(4) 1.96 Å and 1.34Å

**43.** Which one of the following sets of quantum numbers represents an impossible arrangement?

| | n | $\ell$ | $m_l$ | $m_s$ |
|---|---|---|---|---|
| (1) | 3 | 2 | –2 | + 1/2 |
| (2) | 4 | 0 | 0 | + 1/2 |
| (3) | 3 | 2 | –3 | + 1/2 |
| (4) | 5 | 3 | 0 | – 1/2 |

**44.** The ratio of rates of diffusion of $SO_2$, $O_2$ and $CH_4$ under identical condition is :-

(1) 1 : $\sqrt{2}$ : 2 (2) 1 : 2 : 4

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

**45.** Which of the following molecular shape is not produced by $sp^3d$ hybridisation?

(1) Linear

(2) Triangular planar

(3) T-shape

(4) See-saw

**46.** If YZ plane contains all the atoms of formaldehyde (HCHO), what will be the nodal plane of $\pi$ bond?

(1) XY

(2) YZ

(3) XZ

(4) Can not be predicted

**47.** Least soluble alkali metal carbonate is

(1) $Li_2CO_3$ (2) $Na_2CO_3$

(3) $K_2CO_3$ (4) $Cs_2CO_3$

**48.** At NTP, 5.6 litre of a gas weigh 8 gram. The vapour density of gas is :-

(1) 32 (2) 40

(3) 16 (4) 8

**49.** Hard water does not contain

(1) $Ca^{2+}$ with $HCO_3^-$

(2) $Ca^{2+}$ with $SO_4^{-2}$

(3) $Mg^{2+}$ with $Cl^-$

(4) $Mg^{2+}$ with $CO_3^{-2}$

**50.** For a reaction $H_2 + I_2 \rightleftharpoons 2HI$ at 721°C the value of equilibrium constant is 50. If 0.5 moles each of $H_2$ and $I_2$ is added to the system the value of equilibrium constant at the same temperature will be.

(1) 100 (2) 25 (3) 50 (4) 200

**51.** The volume of $CO_2$ at NTP obtained by heating 1 gm of $CaCO_3$ will be

(1) 1 litre

(2) 22.4 litres

(3) 0.224 litre

(4) 11.2 litre

52. Gaseous mixture of contains 56g of $N_2$, 44g of $CO_2$ and 16g of $CH_4$. The total pressure of mixture is 720 mm of Hg. The partial pressure of $CH_4$ is :-

(1) 75 mm of Hg

(2) 160 mm of Hg

(3) 180 mm of Hg

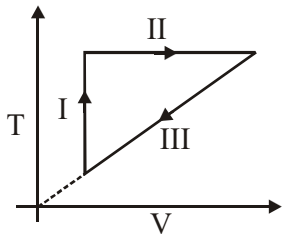
(4) 215 mm of Hg

53. The alkali metal with lowest heat of atomisation is

(1) Li (2) Na

(3) K (4) Cs

54. An ideal gas is subjected to various changes which are plotted as following :




The correct order of processes I, II and III respectively, is -

(1) isothermal, isochoric, isobaric

(2) isobaric , isochoric , isothermal

(3) isochoric, isothermal, isobaric

(4) isochoric, isobaric, isothermal

55. The pH of solution is increased from 3 to 6. Its $H^+$ ion conc. will be :-

(1) Reduced to half

(2) Doubled

(3) Reduced by 1000 times

(4) Increased by 1000 times

56. The conversion of ozone into oxygen is exothermic. Under what conditions is ozone the most stable ?

$2O_3(g) \rightleftharpoons 3O_2(g)$

(1) At low pressure and low temperature

(2) At high pressure and high temperature

(3) At high pressure and low temperature

(4) At low pressure and high temperature

57. The volume (in ml) of 0.5 M NaOH required for the complete reaction with 150 ml of 1.5M $H_3PO_3$ solutions is -

(1) 1350 (2) 900

(3) 1250 (4) 1150

58. Dissociation of $NH_4OH$ is decreased in presence of :-

(1) $CH_3COOH$

(2) KOH

(3) $HNO_3$

(4) None of these

59. Which of the following metal does not react with cold water?

(1) Mg (2) Ca

(3) Ba (4) Na

60. For which reaction is $K_p = K_c$ :-

(1) $2NOCl(g) \rightleftharpoons 2NO(g) + Cl_2(g)$

(2) $N_2(g) + 3H_2(g) \rightleftharpoons 2NH_3(g)$

(3) $H_2(g) + I_2(g) \rightleftharpoons 2HI(g)$

(4) $2SO_2(g) + O_2(g) \rightleftharpoons 2SO_3(g)$

## Attempt any one of the section C or D

## SECTION-C MATHEMATICS

*FOR ADMISSION IN ENGINEERING STREAM*

This section contains **20 Multiple Choice Questions.** Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

**61.** If a, b, c are positive, the minimum value of $(a + b + c)\left(\frac{1}{a}+\frac{1}{b}+\frac{1}{c}\right)$ is

(1) 1 (2) 3

(3) 6 (4) 9

**62.** All chords of the circle $3x^2 + 3y^2 - 4x + 6y = 0$ which subtend a right angle at the origin passes through

(1) (1, – 2) (2) (2, – 1)

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

**63.** If the straight lines $2x - y + 3 = 0$, $x - y + 2 = 0$ and $ax - 2by + c = 0$ are concurrent, then the family of lines $3ax - 2by + c = 0$ is concurrent at (a, b, c are non-zero reals)

(1) $\left(\frac{-1}{3},2\right)$ (2) $\left(\frac{1}{3},1\right)$

(3) $\left(-1,\frac{-1}{3}\right)$ (4) $\left(\frac{-1}{3},1\right)$

**64.** If the image of the $M(\lambda, \lambda^2)$ in the line $x + y = \lambda^2$ is (0, 2) then $\lambda$ can be

(1) –1 (2) –2

(3) 1 (4) 3

**65.** The sum $\sum_{k=1}^{\infty}\frac{2^{k+2}}{3^k}$ equal to

(1) 12 (2) 8 (3) 6 (4) 4

**66.** Let $z = \left(\frac{1+i}{1-i}\right)^{16} + \left(\frac{1-i}{1+i}\right)^{9}$ then

(1) Re(z) = 0 (2) Im(z) = 0

(3) Re(z) + Im(z) = 0 (4) Re(z) – Im(z) = 0

**67.** If the $9^{th}$ term of an A.P. be zero, then the ratio of its $29^{th}$ and $19^{th}$ term is

(1) 1 : 2 (2) 2 : 1

(3) 1 : 3 (4) 3 : 1

**68.** If $\alpha$, $\beta$, $\gamma$ are the roots of the cubic $x^3 - 3x^2 + 2x + k = 0$ ($k \in R$) satisfying the relation $(\alpha + 2)(\beta + 2)(\gamma + 2) = 8$ then the value of 'k' equals

(1) 16 (2) 12

(3) 10 (4) 8

**69.** Number of integral values of x the inequality $\frac{x^4+x^2+1}{x^2-4x-5}<0$ holds true, is

(1) 4 (2) 5

(3) 6 (4) 7

70. The solution of the inequality is $(x-1)(2x+3) \le 0$ is.

(1) $\left[\frac{-3}{2}, 1\right]$

(2) $\left(-\infty, -\frac{3}{2}\right] \cup [1, \infty)$

(3) $(-\infty, 2]$

(4) none of these

71. The line 2x – y + 1 = 0 is tangent to the circle at the point (2, 5) and the centre of the circles lies on x – 2y = 4. The radius of the circle is

(1) $3\sqrt{5}$ (2) $5\sqrt{3}$

(3) $2\sqrt{5}$ (4) $5\sqrt{2}$

72. The area of a triangle with sides of length 13, 16 and $\sqrt{41}$, is

(1) 36 (2) 38

(3) 40 (4) 42

73. Let one root of $ax^2 + bx + c = 0$ where a, b, c are integers be $3+\sqrt{5}$, then the other root is

(1) $3-\sqrt{5}$ (2) 3

(3) $\sqrt{5}$ (4) None of these

74. If the coefficients of $x^7$ & $x^8$ in the expansion of $\left[2+\frac{x}{3}\right]^n$ are equal, then the value of n is:

(1) 15 (2) 45

(3) 55 (4) 56

75. If $5\tan\theta = 4$, then $\frac{5\sin\theta - 3\cos\theta}{5\sin\theta + 2\cos\theta} =$

(1) 0 (2) 1

(3) 1/6 (4) 6

76. If $(a + ib)^5 = \alpha + i\beta$ where a, b, $\alpha$, $\beta \in R$ then $(b + ia)^5$ equals

(1) $a + i\beta)$ (2) $\beta + i\alpha$

(3) $\alpha - i\beta$ (4) $\beta - i\alpha$

77. In $\Delta ABC$ if a = 8, b = 9, c = 10, then the value of $\frac{\tan C}{\sin B}$ is

(1) $\frac{32}{9}$ (2) $\frac{24}{7}$ (3) $\frac{21}{4}$ (4) $\frac{18}{5}$

78. If $\frac{z_1}{z_2}$ is purely imaginary then $\left|\frac{z_1+z_2}{z_1-z_2}\right|$ is equal to :

(1) 1 (2) 2

(3) 3 (4) 0

79. The expression $2(1 + \cos x) - \sin^2 x$ is the same as

(1) $1 + \cos^2 x$ (2) $(1 + \sin x)^2$

(3) $1 - \cos^2 x$ (4) $(1 + \cos x)^2$

80. The sum of the binomial coefficients of $\left[2x+\frac{1}{x}\right]^n$ is equal to 256. The constant term in the expansion is

(1) 1120 (2) 2110

(3) 1210 (4) none

## SECTION-D : BIOLOGY

*FOR ADMISSION IN MEDICAL STREAM*

This section contains **20 Multiple Choice Questions.** Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

**81.** Organelle which is known as power house of cell.

(1) Mitochondria (2) Chloroplast

(3) Ribosome (4) Nucleus

**82.** Simple squamous epithelium can be observed in:

(1) Capillary (2) Male urethra

(3) Female urethra (4) Both (1) and (2)

**83.** RER is associated with

(1) Protein synthesis (2) Lipid synthesis

(3) Steroid synthesis (4) Lipid transport

**84.** Which one of the following is a matching pair of the phylum and the animal given?

(1) Echinodermata - Octopus

(2) Annelida - Leech

(3) Coelenterata - Chameleon

(4) Mollusca - Scorpion

**85.** Which cell cannot undergo cell division?

(1) Neuron

(2) Osteoblast

(3) Chondroblast

(4) Leucocyte

**86.** Which one of the following phyla is correctly matched with its two general characteristics?

(1) Arthropoda – Body divided into head, thorax and abdomen and respiration by tracheae

(2) Annelida –Notochord at some stage and separate anal and urinary openings to the outside

(3) Echinodermata – Pentamerous radial symmetry and mostly direct development

(4) Coelentrata – Normally oviparous and development through a trochophore or veliger larva

**87.** Nodules with nitrogen fixing bacteria are present in

(1) Wheat (2) Cotton

(3) Mustard (4) Gram

**88.** The five kingdom classification was proposed by

(1) Engler and Prantl

(2) Eichler

(3) Benthan and Hooker

(4) Whittaker

**89.** The correct sequence in cell cycle

(1) S – M – $G_1$ – $G_2$

(2) S – $G_1$– $G_2$ – M

(3) $G_1$ – S – $G_2$ – M

(4) M – $G_1$ – $G_2$ – S

**90.** "Omnis cellula e cellula" is the statement proposed by

(1) Schielden (2) Schwann

(3) Both (1) and (2) (4) Rudolf Virchow

**91.** Viroids have

(1) Single stranded DNA with protein coat

(2) Double stranded DNA with protein coat

(3) Single stranded RNA not enclosed by protein coat

(4) Double stranded RNA enclosed by protein coat

**92.** The plant body of Moss (Funaria) is

(1) Completely sporophyte

(2) Predominantly gametophyte with parasitic sporophyte

(3) Completely gametophyte

(4) Predominantly sporophyte with gametophyte

**93.** One example of animals having a single opening to the outside that serves both as mouth as well as anus is :

(1) Octopus (2) Asterias

(3) Ascidia (4) Fasciola

**94.** In which one of the following groups, all the three are examples of polysaccharides?

(1) Starch, glycogen, cellulose

(2) Sucrose, maltose, glucose

(3) Glucose, fructose, lactose

(4) Galactose, starch, sucrose

**95.** Herbarium is collection of

(1) Living plant specimen

(2) Dried and pressed plant specimen mounted on a sheet

(3) Collection of flowers

(4) Collection of animals preserved in solution

**96.** Which of the following is not algae

(1) Spirogyra (2) Chlamydomonas

(3) Volvox (4) Pinus

**97.** Hydrolytic enzymes which act at low pH are called as

(1) proteases (2) á-amylases

(3) hydrolases (4) peroxidases

**98.** Part of cauliflower that we eat is:

(1) Stem (2) Leaf

(3) Inflorescence (4) Flower

**99.** Brush border is characteristic of

(1) Neck of nephron

(2) collecting tube

(3) proximal convoluted tubule

(4) All of the above

**100.** Pneumatic bones are expected to be found in

(1) pigeon (2) house lizard

(3) frog's tadpole (4) flying fish

**SPACE FOR ROUGH WORK**