

PART—I : Core Subjects

(Section A : Mathematics) [Q. Nos. 1-32]

1. If $f(x) = \begin{cases} x & ; x < 1 \\ x-1 & ; x \geq 1 \end{cases}$ then $\int_0^2 x^2 f(x) dx$ is equal to

[A] 1 [B] $\frac{4}{3}$
[C] $\frac{5}{3}$ [D] $\frac{5}{2}$

2. Find the area bounded by the parabola $x^2 = y$ and line $y = 1$.

[A] 2 [B] $\frac{4}{3}$
[C] $\frac{2}{3}$ [D] $\frac{8}{3}$

3. An urn contains nine balls of which three are red, four are blue and two are green. Three balls are drawn at random without replacement from the urn. The probability that the three balls have different colours is

[A] $\frac{2}{7}$ [B] $\frac{1}{21}$
[C] $\frac{2}{23}$ [D] $\frac{1}{3}$

4. A line makes angles α, β, γ with the coordinate axes. If $\alpha + \beta = 90^\circ$, then $\gamma =$

[A] 0° [B] 90°
[C] 180° [D] 45°

5. If the vectors $\vec{a} = \hat{i} - \hat{j} + 2\hat{k}$, $\vec{b} = 2\hat{i} + 4\hat{j} + \hat{k}$ and $\vec{c} = \lambda\hat{i} + \hat{j} + \mu\hat{k}$ are mutually orthogonal (perpendicular), then $(\lambda, \mu) =$

[A] (2, -3) [B] (-2, 3)
[C] (3, -2) [D] (-3, 2)

6. Solution of differential equation $\frac{dv}{dt} + \frac{k}{m}v = -g$ is

[A] $v = ce^{\frac{k}{m}t} - \frac{mg}{k}$
[B] $v = c - \frac{mg}{k}e^{\frac{k}{m}t}$
[C] $ve^{\frac{k}{m}t} = c - \frac{mg}{k}$
[D] $ve^{\frac{k}{m}t} = c - \frac{mg}{k}$

7. Solve $\frac{d^2y}{dx^2} - 2\frac{dy}{dx} + y = 0$

[A] $y = (c_1 + c_2x)e^x$
[B] $y = (c_1e^x + c_2e^{-x})$
[C] $y = (c_1x)e^x$
[D] None of the above

8. If $(2 + \sin x)\frac{dy}{dx} + (y+1)\cos x = 0$ and $y(0) = 1$, then $y\left(\frac{\pi}{2}\right)$ is equal to

[A] $\frac{1}{3}$ [B] $-\frac{2}{3}$
[C] $-\frac{1}{3}$ [D] $\frac{4}{3}$

9. Solution of the differential equation $\frac{dy}{dx} + \frac{1+y^2}{\sqrt{1-x^2}} = 0$ is

[A] $\tan^{-1}y + \sin^{-1}x = c$
[B] $\sin^{-1}y + \tan^{-1}x = c$
[C] $\tan^{-1}y + \sin^{-1}x = c$
[D] $\cot^{-1}\frac{1}{y} + \cos^{-1}\sqrt{1-x^2} = c$

10. If four unbiased coins are tossed, the probability of getting at least two heads is

[A] $\frac{1}{8}$
[B] $\frac{3}{4}$
[C] $\frac{1}{4}$
[D] None of the above

11. Let $f(x) = \begin{cases} 1 + \frac{2x}{a} & ; 0 \leq x \leq 1 \\ ax & ; 1 \leq x \leq 2 \end{cases}$, if $\lim_{x \rightarrow 1} f(x)$ exists, then value of a is

[A] 1, 2 [B] -1, -2
[C] -1, 2 [D] -2, 1

12. The image of the point $A(1, 2)$ by the line mirror $y = x$ is the point B and the image of B by the line mirror $y = 0$ is the point (α, β) , then

[A] $\alpha = 1, \beta = -2$ [B] $\alpha = 0, \beta = 0$
[C] $\alpha = 2, \beta = -1$ [D] $\alpha = 1, \beta = -1$

13. Let $A = \begin{bmatrix} -1 & 3 \\ -3 & 5 \end{bmatrix}$. Then the eigenvalues of the matrix are

[A] -2, -2 [B] 2, -2
[C] 2, 2 [D] 1, 3

14. The value of λ , such that the following system of equations has no solution, is

$$2x - y - 2z = 2, \quad x - 2y + z = -4, \\ x + y + \lambda z = 4$$

[A] 3 [B] 1
[C] 0 [D] -3

15. Let P be the 3×3 matrix such that $P^3 - P^2 + P + I_3 = \bar{O}$. Then which one of the following is true?

[A] $P^4 = I_3$
[B] $P^4 = P^3 + P^2 - P$
[C] $P^2 - P + I_3 + P^{-1} = \bar{O}$
[D] $P^7 = P^{-1}$

16. If $u(x, y) = e^{\frac{x}{y}} + \tan^{-1}\frac{x}{y}$, then

$x\frac{\delta u}{\delta x} + y\frac{\delta u}{\delta y} =$
[A] 0
[B] $\frac{x}{y^2}$
[C] $-\frac{y}{x^2}$
[D] None of the above

17. Particular integral of the differential equation $\frac{d^2y}{dx^2} + 8\frac{dy}{dx} + 16y = e^{-2x}$ is

[A] $(c_1 + c_2)e^{4x}$
[B] $(c_1 + c_2x)e^{-4x} + \frac{1}{4}e^{-2x}$
[C] $\frac{1}{4}e^{-2x}$
[D] $-\frac{1}{4}e^{-2x}$

18. There are two identical urns containing 3 white and 5 red balls; 4 white and 9 red balls. An urn is chosen at random and a ball is drawn from it. Find the probability that the ball is white.

[A] $\frac{4}{27}$
[B] $\frac{71}{108}$
[C] $\frac{71}{104}$
[D] $\frac{71}{208}$

19. If $u(x, y) = \cos^{-1}\left(\frac{x+y}{\sqrt{x+y}}\right)$, then

[A] $x\frac{\partial u}{\partial x} + y\frac{\partial u}{\partial y} + \frac{1}{2}\cot u = 0$
[B] $x\frac{\partial u}{\partial x} + y\frac{\partial u}{\partial y} - \frac{1}{2}\cot u = 0$
[C] $x\frac{\partial u}{\partial x} + y\frac{\partial u}{\partial y} = \frac{1}{2}\cot u$
[D] $x\frac{\partial u}{\partial x} + y\frac{\partial u}{\partial y} = 0$

20. If $x = \sin\left(\frac{1}{m}\log_e y\right)$, then which one is correct?

[A] $(1-x^2)\frac{d^2y}{dx^2} - x\frac{dy}{dx} + m^2y = 0$
[B] $(1-x^2)\frac{d^2y}{dx^2} - x\frac{dy}{dx} - m^2y = 0$
[C] $(1-x^2)\frac{d^2y}{dx^2} + x\frac{dy}{dx} + m^2y = 0$
[D] $(1-x^2)\frac{d^2y}{dx^2} + x\frac{dy}{dx} - m^2y = 0$

21. Let $f(x) = \begin{cases} \frac{x-3}{x-3} & \text{when } x \neq 3 \\ 1 & \text{when } x = 3 \end{cases}$, then

which option is correct?

- [A] $f(x)$ is left discontinuous at $x = 2$
 [B] $f(x)$ is right continuous at $x = 2$
 [C] $f(x)$ has jump discontinuous at $x = 2$
 [D] All of the above

22. If $\int_0^t x f(x) dx = \frac{2}{5} t^5$, $t > 0$, then the value of $f\left(\frac{4}{25}\right)$ is

- [A] $\frac{2}{5}$ [B] $\frac{5}{2}$
 [C] $-\frac{2}{5}$ [D] 1

23. The maximum value of $f(x) = \frac{\log_e x}{x}$ in the interval $0 < x < \infty$ is

- [A] e^e [B] e^e
 [C] e [D] $\frac{1}{e}$

24. The value of $i^{2020} + i^{2021} + i^{2022} + i^{2023}$ is equal to

- [A] 1 [B] 0
 [C] i [D] $-i$

25. Let $\vec{a} = \hat{i} + \hat{j} + \hat{k}$, $\vec{b} = \hat{i} - \hat{j} + \hat{k}$ and $\vec{c} = \hat{i} - \hat{j} - \hat{k}$ be three vectors. A vector \vec{v} in the plane of \vec{a} and \vec{b} , whose projection on \vec{c} is $\frac{1}{\sqrt{3}}$, is given by

- [A] $\hat{i} - 3\hat{j} + 3\hat{k}$
 [B] $-3\hat{i} - 3\hat{j} - \hat{k}$
 [C] $3\hat{i} - \hat{j} + 3\hat{k}$
 [D] $\hat{i} + 3\hat{j} - 3\hat{k}$

26. Let A and B be two square matrices of same order and $AB = A$, $BA = B$. Then

- [A] $A^2 = A$ [B] $A^2 = I$
 [C] $A^2 = \vec{0}$ [D] $A^2 \neq I$

27. Let A be a square matrix of order 3 with $\det(A) = 3$. If $B = 2A^3$, then $\det(B)$ is equal to

- [A] 20 [B] 108
 [C] 216 [D] 54

28. The inequality $|z - 4| < |z - 2|$ represents

- [A] $\operatorname{Re}(z) > 0$ [B] $\operatorname{Re}(z) < 0$
 [C] $\operatorname{Re}(z) > 2$ [D] $\operatorname{Re}(z) > 3$

29. If $1, \omega, \omega^2$ be the cube roots of unity,

then $\Delta = \begin{vmatrix} 1 & \omega^5 & \omega^{10} \\ \omega^5 & \omega^{10} & 1 \\ \omega^{10} & 1 & \omega^5 \end{vmatrix}$ is equal to

- [A] 0 [B] 1
 [C] ω [D] ω^2

30. If α and β are the roots of the equation $x^2 - x + 1 = 0$, then $\alpha^{2022} + \beta^{2022} =$

- [A] -1 [B] 1
 [C] 2 [D] 0

31. The length of the latus rectum of the ellipse $9x^2 + 4y^2 = 1$ is

- [A] $\frac{3}{2}$ [B] $\frac{8}{3}$
 [C] $\frac{4}{9}$ [D] $\frac{8}{9}$

32. The equation of the circle which touches both the axes and the line $\frac{x}{3} + \frac{y}{4} = 1$ and lies in the first quadrant is $(x - c)^2 + (y - c)^2 = c^2$, where c is

- [A] 1 [B] 2
 [C] 4 [D] 6

(Section B : Physics) [Q. Nos. 33-56]

33. When a body is thrown with a velocity u making an angle θ with the horizontal plane, the maximum distance covered by it in horizontal direction is

- [A] $\frac{u^2 \sin \theta}{g}$
 [B] $\frac{u^2 \sin 2\theta}{2g}$
 [C] $\frac{u^2 \sin 2\theta}{g}$
 [D] $\frac{u^2 \cos 2\theta}{g}$

34. An iron rod of length 2 m and cross-section area of 50 mm^2 stretched by 0.5 mm, when a mass of 250 kg is hung from its lower end. Young's modulus of the iron rod is

- [A] $19.6 \times 10^{10} \text{ N/m}^2$
 [B] $19.6 \times 10^{15} \text{ N/m}^2$
 [C] $19.6 \times 10^{18} \text{ N/m}^2$
 [D] $19.6 \times 10^{20} \text{ N/m}^2$

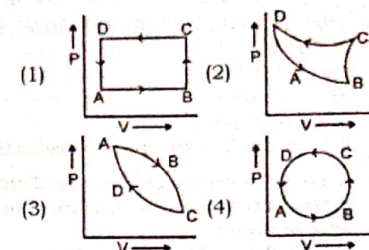
35. A metal block is experiencing an atmospheric pressure of $1 \times 10^5 \text{ N/m}^2$, when the same block is placed in a vacuum chamber, the fractional change in its volume is (the bulk modulus of metal is $1.25 \times 10^{11} \text{ N/m}^2$)

- [A] 4×10^{-7}
 [B] 2×10^{-7}
 [C] 8×10^{-7}
 [D] 1×10^{-7}

36. If pressure at half the depth of a lake is equal to $2/3$ pressure at the bottom of the lake, then what is the depth of the lake?

- [A] 10 m
 [B] 20 m
 [C] 60 m
 [D] 30 m

37. In the figures (1) to (4), variation of volume by change of pressure is shown below:



A gas is taken along the path ABCDA. The change in internal energy of the gas will be

- [A] positive in all cases from (1) to (4)
 [B] positive in cases (1), (2) and (3) but zero in case (4)
 [C] negative in cases (1), (2) and (3) but zero in case (4)
 [D] zero in all the four cases

38. The amount of heat required to change the state of 1 kg of substance at constant temperature is called

- [A] kilocal [B] calorie
 [C] specific heat [D] latent heat

39. If a bimetallic strip is heated, it will

- [A] bend towards the metal with lower thermal expansion coefficient
 [B] bend towards the metal with higher thermal expansion coefficient
 [C] twist itself into helix
 [D] have no bending

40. Water is usually heated by

- [A] conduction
 [B] convection
 [C] radiation
 [D] All of the above

41. The image of a real object formed by a plane mirror is

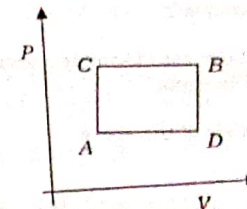
- [A] erect, real and of equal size
 [B] erect, virtual and of equal size
 [C] inverted, real and of equal size
 [D] inverted, virtual and of equal size

42. If the critical angle for total internal reflection from a medium to vacuum is 30° , then the speed of light in the medium is
 [A] 6×10^8 m/s [B] 3×10^8 m/s
 [C] 2×10^8 m/s [D] 1.5×10^8 m/s
43. Transmission of light in optical fiber is due to
 [A] scattering
 [B] diffraction
 [C] polarisation
 [D] multiple total internal reflections
44. A person cannot clearly see distance more than 40 cm. He is advised to use lens of power
 [A] -2.5 D [B] 2.5 D
 [C] -625 D [D] 1.5 D
45. Two lenses of focal lengths f_1 and f_2 are kept in contact coaxially. The resultant power of combination will be
 [A] $\frac{f_1 f_2}{f_1 - f_2}$ [B] $\frac{f_1 + f_2}{f_1 f_2}$
 [C] $f_1 + f_2$ [D] $\frac{f_1 + f_2}{f_2 - f_1}$
46. Light from a hydrogen discharge tube is incident on the cathode of a photoelectric cell. The work function of the cathode surface is 4.2 eV. In order to reduce the photocurrent to zero the voltage of the anode relative to the cathode must be made
 [A] -4.2 V [B] -9.4 V
 [C] -17.8 V [D] +9.4 V
47. What is de Broglie wavelength of electron having energy 10 keV?
 [A] 0.12 Å
 [B] 1.2 Å
 [C] 12.2 Å
 [D] None of the above
48. Radius of one arm of hydraulic lift is four times of radius of other arm. What force should be applied on narrow arm to lift 100 kg?
 [A] 26.5 N [B] 62.5 N
 [C] 6.25 N [D] 8.3 N
49. A mercury drop of radius 1 cm is broken into 10^6 droplets of equal size. The work done is ($\rho = 35 \times 10^{-2}$ N/m)
 [A] 4.35×10^{-2} J [B] 4.35×10^{-3} J
 [C] 4.35×10^{-6} J [D] 4.35×10^{-8} J

(Section C : Chemistry) [Q. Nos. 57-72]

57. Which among the following is a buffer solution?
 [A] HCl + NaCl
 [B] NaCl + HNO₃
 [C] NH₄NO₃ + KNO₃
 [D] NH₄NO₃ + NH₄OH
58. During the electrolysis of molten sodium chloride, the time required to produce 0.10 mol of chlorine gas using a current of 3 amperes is
 [A] 55 minutes
 [B] 110 minutes
 [C] 330 minutes
 [D] 220 minutes
59. In the lead storage cell, which is used as cathode?
 [A] Lead rod
 [B] Zn-metal
 [C] Lead plates coated with PbO₂
 [D] Graphite rod
60. Consider the reaction equilibrium $2\text{SO}_2(g) + \text{O}_2(g) \rightleftharpoons 2\text{SO}_3(g)$; $\Delta H^\circ = -198$ kJ. On the basis of Le Chatelier's principle, the condition favourable for the forward reaction is
 [A] high temperature and high pressure
 [B] high temperature and low pressure
 [C] low temperature and high pressure
 [D] low temperature and low pressure

61. A gas can be taken from A to B via two different processes ACB and ADB. When path ACB is used 60 J of heat flows into the system and 30 J of work is done by the system. If path ADB is used, work done by the system is 10 J. The heat flow into the system in path ADB is



- [A] 50 J
 [B] 40 J
 [C] 45 J
 [D] 30 J
62. The metal which cannot be extracted by carbon-reduction process is
 [A] lead
 [B] zinc
 [C] iron
 [D] aluminium
63. Composition of gun metal is
 [A] 88 % Cu, 10% Sn, 2% Zn
 [B] 80% Cu, 10% Sn, 10% Zn
 [C] 85 % Cu, 10% Sn, 5% Zn
 [D] 90 % Cu, 8% Sn, 2% Zn

64. Water sample X contains 1.11 mg CaCl_2 per litre and water sample Y contains 0.95 mg MgCl_2 per litre. Which of the following statements is correct?

- [A] Hardness of sample X is greater than sample Y
- [B] Hardness of sample X is less than sample Y
- [C] Hardness of sample X and sample Y is equal
- [D] None of the above

65. In the determination of hardness of water by EDTA, at the end point colour change occurs wine red to blue. This blue colour is due to the formation of

- [A] EBT-Mg complex
- [B] EDTA-Ca complex
- [C] free EBT
- [D] EDTA-Mg complex

66. How many isomers are possible with the molecular formula C_5H_{12} ?

- [A] 3
- [B] 4
- [C] 5
- [D] 2

67. The IUPAC name of acetyl salicylic acid is

- [A] *m*-benzoic acid
- [B] 2-acetoxy benzoic acid
- [C] *p*-benzoic acid
- [D] *p*-acetyl benzoic acid

68. Among the following species which two have a trigonal bipyramidal shape?

- (I) NI_3
- (II) I_3^-
- (III) SO_3^{2-}
- (IV) NO_3^-
- [A] II and III
- [B] III and IV
- [C] I and IV
- [D] I and III

69. Which of the following sets of quantum numbers belongs to the highest energy?

- [A] $n = 2, l = 1, m = 0, s = +1/2$
- [B] $n = 3, l = 0, m = 0, s = +1/2$
- [C] $n = 4, l = 0, m = 1, s = +1/2$
- [D] $n = 4, l = 1, m = 1, s = +1/2$

70. Which of the following statements is true?

- [A] Bond angle of water is 104.5°
- [B] Bond angle of ammonia is 107°
- [C] Bond angle of water and ammonia are same, equal to 109.28°
- [D] Both [A] and [B] are correct

71. The number of hydrogen bond per water molecule is

- [A] 3
- [B] 4
- [C] 5
- [D] 2

72. What is the minimum pH of a solution 0.1 M in Mg^{+2} from which $\text{Mg}(\text{OH})_2$ will not precipitate $K_{sp} = 1.0 \times 10^{-11}$?

- [A] 7
- [B] 8
- [C] 9
- [D] 10

(Section D : FEEE) [Q. Nos. 73-80]

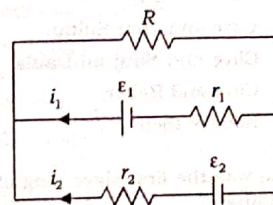
73. For a DC machine shunt resistance and armature resistance values are

- [A] high and high
- [B] high and low
- [C] low and low
- [D] low and high

74. Under resonance condition the phase angle between voltage phase and current phase is

- [A] 0°
- [B] 90°
- [C] -90°
- [D] 45°

75. See the electric circuit shown in this figure below. Which of the following equations is a correct equation for it?



- [A] $\epsilon_2 - i_2 r_2 - \epsilon_1 - i_1 r_1 = 0$
- [B] $-\epsilon_2 - (i_1 + i_2)R + i_2 r_2 = 0$
- [C] $\epsilon_1 - (i_1 + i_2)R + i_1 r_1 = 0$
- [D] $\epsilon_1 - (i_1 + i_2)R - i_1 r_1 = 0$

76. The element that has the biggest size in a transistor is

- [A] collector
- [B] base
- [C] emitter
- [D] collector-base junction

78. The Op-Amp can amplify

- [A] AC signals only
- [B] DC signals only
- [C] both AC and DC signals
- [D] Neither AC nor DC signals

78. Which of these sets of logic gates are designated as universal gates?

- [A] NOR, NAND
- [B] XOR, NOR, NAND
- [C] OR, NOT, AND
- [D] NOR, NAND, XNOR

79. A high frequency AC signal is applied to a PMMC instrument. The RMS value of the AC signal is 2 V, the reading of the instrument is

- [A] 2 V
- [B] $2\sqrt{2}$ V
- [C] $\sqrt{2}$ V
- [D] zero

80. For a transformer with primary turns 400, secondary turns 100, if 20 A current is flowing through primary, we will get

- [A] 800 A at secondary
- [B] 40 A at secondary
- [C] 80 A at secondary
- [D] 5 A at secondary

(General Knowledge, General English & Islamic History and Culture)

81. Fill in the space with an infinitive :

It is easy _____ but hard to finish.

- [A] to end
- [B] to fall
- [C] to lose
- [D] to begin

82. Fill in the blank with the correct word :

A _____ jewel was in the locker.

- [A] browning
- [B] filling
- [C] shining
- [D] moving

83. 'Made up his mind' means

- [A] Remembered
- [B] Resolved
- [C] Forgot
- [D] Lost

84. Fill in the blank with the correct word :

_____ pompous he was an entertaining person.

- [A] Though
- [B] Never
- [C] Despite
- [D] Before

85. In the given sentence identify the section with grammatical error.

No sooner did we receive your message when we heaved a sigh of relief.

- [A] did we receive
- [B] a sigh of relief
- [C] your message
- [D] when we heaved

86. Sindh was conquered by Muhammad Bin Qasim during the period of

মুহম্মদ বিন কাসিম সিদ্ধু জয় করেছিলেন _____ -এর সময়কালে।

- [A] Abbasids
- [B] Ummayyads
- [C] Idrisids
- [D] None of them

87. Haji Shariatullah belonged to

হাজী শরীয়তুল্লাহ কোথাকার লোক ছিলেন?

- [A] Bengal
- [B] Afghan
- [C] Delhi
- [D] Sindh

88. Battle of Plassey was fought between

পলাশীর যুদ্ধ হয় _____ -এর মধ্যে।

- [A] Clive and Tipu Sultan
- [B] Clive and Siraj-ud-Daula
- [C] Clive and Babar
- [D] None of them

89. Who was the first slave king of Delhi Sultanate?

দিল্লী সালতানাতের প্রথম দাস রাজা কে ছিলেন?

- [A] Qutb ud-din Aibak
- [B] Iltutmish
- [C] Razia Sultana
- [D] Alauddin Khalji

90. A building for Muslim prayer is also known as

মুসলমানদের নামাজের জন্য ভবনটি কি নামে পরিচিত?

- [A] Masjid
- [B] Church
- [C] Temple
- [D] Synagogue

91. What does Ghusl mean?

গোসল বলতে কি বোঝায়?

- [A] Cleaning the entire body and hair while taking bath or shower
- [B] Performing wudu
- [C] Swimming
- [D] None of the above

92. One obligation of a Muslim is to make at least one Pilgrimage (Hajj) to

একজন মুসলমানের _____ -তে কমপক্ষে একটি তীর্থযাত্রা (হজ) করতে যাওয়া বাধ্যতামূলক।

- [A] Medina
- [B] Mt. Arafat
- [C] Baghdad
- [D] Mecca

93. During Hajj, men wear two special clothes. What is the colour of the cloth?

হজের সময় পুরুষেরা দুটি বিশেষ পোশাক পরিধান করেন। কাপড়ের রং কি?

- [A] Black
- [B] White
- [C] Brown
- [D] Gray

94. Battle of Karbala occurred during the reign of

কারবালার যুদ্ধ সংঘটিত হয়েছিল _____ -এর শাসনকালে।

- [A] Amir Muawiyah
- [B] Harun al-Rasheed
- [C] Yazeed
- [D] None of them

95. Imam Abu Hanifa was a

ইমাম আবু হানিফা ছিলেন একজন

- [A] Philosopher
- [B] Jurist
- [C] Poet
- [D] None of the above

96. To whom did Mahatma Gandhi give the title 'Deenbandhu'?

মহাত্মা গান্ধী কাকে 'দীনবন্ধু' নামে অভিহিত করেছিলেন?

- [A] Abdul Ghaffar Khan
- [B] Rajendra Prasad
- [C] Rabindranath Tagore
- [D] C. F. Andrews

97. Which of the following is a Rabi crop?

এদের মধ্যে কোনটি রবি শস্য?

- [A] Jowar
- [B] Tur
- [C] Bajra
- [D] Wheat

98. A place where bees are kept, is called

মৌমাছির চাষের/রাখার জায়গাকে কি বলা হয়?

- [A] Apiary
- [B] Hive
- [C] Sanctuary
- [D] Stable

99. Who among the following invented the World Wide Web (www)?

World Wide Web (www) কে আবিষ্কার করেছিলেন?

- [A] Bill Gates
- [B] Steve Wozniak
- [C] Tim Berners-Lee
- [D] Charles Babbage

100. Tides are primarily a result of

জোয়ার-ভাটা কিসের ফলে হয়?

- [A] attraction of the Moon
- [B] Farrel's law
- [C] ocean currents
- [D] None of the above