Physics
Paper III

Time Allowed : 2½ Hours]   **[Maximum Marks : 150**

Note : This Paper contains **Seventy Five (75)** multiple choice questions, each question carrying **Two (2)** marks. Attempt *All* questions.

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1. The eigenvalues of (2 × 2) matrix

$$\begin{bmatrix} 2 & 3 \\ 1 & 0 \end{bmatrix}$$

 are :

 (A) 0, 2

 (B) 1, 3

 (C) 3, –1

 (D) $1 + i, 1 - i$

2. The asymptotic behaviour of the curve $y = e^{-x^2} \sin x$ is :

 (A) oscillatory

 (B) goes to zero

 (C) not defined

 (D) goes to unity

3. Five boys and three girls are to stand in a line for a photograph, in such a way that no two girls are adjacent. Number of ways in which this can be done is :

 (A) 720

 (B) 360

 (C) 14400

 (D) 11600

4. The room temperature measured by different instruments gave the following results :

 37°C, 70°F, 311°K, 35°C

 The average temperature would be :

 (A) 113°K

 (B) 37°C

 (C) 35°C

 (D) 70.5°F

5. $\lim\limits_{x \to 0} x^x$ is :

 (A) 0

 (B) 1

 (C) i

 (D) ∞

6. The particular integral of the inhomogeneous linear differential equation :

$$\frac{dy}{dx} - y = x$$

 is given by :

 (A) e^x

 (B) $x\, e^x$

 (C) $-x - 1$

 (D) $x + 1$

7. Masses m and $3m$ are attached to the two ends of a spring of spring constant k. What is the period of oscillation ?

(A) $4\pi\sqrt{\dfrac{m}{k}}$

(B) $2\pi\sqrt{\dfrac{k}{m}}$

(C) $2\pi\sqrt{\dfrac{m}{2k}}$

(D) $\pi\sqrt{\dfrac{3m}{k}}$

8. The mutual potential energy v of two particles depends on their mutual distance r as follows :

$$v = \frac{a}{r^2} - \frac{b}{r}$$

where a and b are positive constants. For what separation r are the particles in static equilibrium ?

(A) $r = a + b$

(B) $r = ab/a + b$

(C) $r = 2a/b$

(D) $r^2 = a^2 + b^2$

9. The captain of a boat becalmed in the equatorial doldrum moves the anchor vertically upwards with velocity v. Will the boat start moving ? Which way ?

(A) Yes, northwards

(B) Yes, eastwards

(C) Yes, westwards

(D) no.

10. An empty cylindrical can and a can tightly packed with wheat flour, both start rolling down on inclined plane at the same instant. Which can reaches the bottom first ?

(A) Empty can

(B) Filled can

(C) Both arrive at the same time

(D) Sizes of the cans must be known to answer this question

11. For attractive inverse square forces the shape of the orbit will be :

(A) Elliptic

(B) Parabolic

(C) Hyperbolic

(D) All of the above

12. A cork is submerged in a pail of water by a spring attached to the bottom of the pail. The pail is held by a child in an elevator. During the initial acceleration as the elevator travels to the next lower floor, the length of the spring will :

(A) increase

(B) decrease

(C) remain the same

(D) any one of the above depending on the spring constant

13. In free space, an infinite grounded conducting plane is placed in xy plane. The force experienced by a point charge q at a point $(0, 0, d)$ $d > 0$ is ....

(A) $\bar{0}$

(B) $\dfrac{1}{4\pi \in_0} \dfrac{q^2}{d^2} \hat{z}$

(C) $\dfrac{1}{16\pi \in_0} \dfrac{q^2}{d^2} \hat{z}$

(D) $\dfrac{-1}{16\pi \in_0} \dfrac{q^2}{d^2} \hat{z}$

14. The dimensions of a quantity $\in_0 E^2$ are ....

(A) MLT^{-2}

(B) ML^2T^{-2}

(C) $ML^{-1}T^{-2}$

(D) $ML^{-2}T^2$

15. The direction of propagation of electromagnetic wave is given by ....

    (A) $\overline{E}$

    (B) $\overline{B}$

    (C) $\overline{E} \times \overline{B}$

    (D) $\overline{B} \times \overline{E}$

16. Electric field at large distance r, from the electric quadrupole is proportional to ....

    (A) r^{-2}

    (B) r^{-3}

    (C) r^{-4}

    (D) r^3

17. An electron enters a uniform magnetic field region with its velocity perpendicular to the direction of the field. In the field region, the trajectory of the electron is ....

    (A) linear

    (B) circular

    (C) parabolic

    (D) hyperbolic

18. An infinitely long straight wire is carrying current I. The magnetic field at a distance r from it is ....

    (A) $\dfrac{\mu_0 \, I}{r}$

    (B) $\dfrac{\mu_0 \, I}{\pi r}$

    (C) $\dfrac{\mu_0 \, I}{2\pi r}$

    (D) $\dfrac{\mu_0 \, I}{\pi r^2}$

19. The parity of wave function ψ is associated with which of the following transformation ?

   (A) Space inversion

   (B) Space rotation

   (C) Space translation

   (D) Space exchange of two particles

20. The energy levels of the deuterium atom are given in terms of the principal quantum number n and a positive constant A by the expression :

   (A) $A(n + ½)$

   (B) $A\left(-\dfrac{1}{4} + \dfrac{1}{n^2}\right)$

   (C) $-A/n^2$

   (D) An^2

21. A one-dimensional harmonic oscillator is perturbed by a perturbation potential αx^3. The ground state energy of the oscillator to a first order perturbation is :

   (A) $\dfrac{\hbar\omega}{2}$

   (B) $\dfrac{\hbar\omega}{2} + \alpha$

   (C) $\dfrac{3}{2}\hbar\omega + \alpha$

   (D) $\dfrac{\hbar\omega}{2} + \alpha^3$

22. The configuration of three electrons $1s2p3p$ has which of the following as the value of its maximum possible total angular momentum quantum number ?

   (A) $\dfrac{7}{2}$

   (B) $\dfrac{5}{2}$

   (C) 3

   (D) $\dfrac{3}{2}$

23. A freely moving electron is localized in space to within Δx at x_0, its wave function can be described by a wave packet :

$$\psi(x, t) = \int_{-\infty}^{\infty} e^{i(kx - wt)} f(k) dk,$$

where $f(k)$ is peaked around a central value k_0. Which of the following is most nearly the width of the peak in k ?

(A) $\Delta k = \dfrac{1}{x_0}$

(B) $\Delta k = \dfrac{1}{\Delta x}$

(C) $\Delta k = \dfrac{\Delta x}{x_0^2}$

(D) $\Delta k = (\Delta x) \dfrac{k_0}{x_0}$

24. ψ_1 and ψ_2 are two orthonormal wave functions for an electron. Which of the following can describe a state of two electrons ?

(A) $\psi_1(x_1) \ \psi_2(x_2)$

(B) $\dfrac{\left[\psi_1(x_1) + \psi_2(x_2) \right]}{\sqrt{2}}$

(C) $\dfrac{1}{\sqrt{2}} \{ \psi_1(x_1) \psi_2(x_2) + \psi_1$

(D) $\dfrac{1}{\sqrt{2}} \{ \psi_1(x_1) \psi_2(x_2) - \psi_1$

$$(x_2) \psi_2(x_1) \}$$

25. Consider distributing 2 identical particles over 3 energy levels. Treating the particles as indistinguishable Fermi-Dirac particles, the number of ways of distributing is :

(A) 9

(B) 6

(C) 3

(D) 2^3

6

26. The energy density of the photon gas maintained at a temperature 'T' is proportional to T^n, where 'n' is :

(A) 1

(B) 2

(C) 3

(D) 4

27. The average value $\bar{v}$ (non-relativistic) of the velocity of a gas of molecules maintained at a temperature 'T' is given by :

(A) $\dfrac{1}{2}k_B T$

(B) zero

(C) $\dfrac{3}{2}k_B T$

(D) $\dfrac{k_B T}{m}$

28. In the canonical ensembles the system :

(A) is not maintained at a fixed temperature

(B) can exchange energy with the surroundings

(C) can exchange the number of particles with the surroundings

(D) is completely isolated from the surroundings

29. The entropy of the universe in a reversible process is :

(A) is constant

(B) is increasing

(C) is decreasing

(D) becomes infinite

30. For a system in thermodynamic equilibrium the following must be necessarily constant throughout the system :

(A) Temperature and pressure

(B) Temperature and not pressure

(C) Pressure and chemical potential

(D) Temperature, pressure, chemical potential

31. Noise voltage varies in a resistor as :

(A) $4k\mathrm{TR_B}$

(B) $\sqrt{4k\mathrm{TR_B}}$

(C) $\sqrt{2e\mathrm{I_P B}}$

(D) $\sqrt{2e\mathrm{I_P B.R}}$

32. G.M. counter is used for the detection of :

(A) only alpha particles

(B) only beta particles

(C) only gamma radiation

(D) alpha, beta and gamma radiations

33. In a photomultiplier if each stage emits 4 secondaries per primary and there are ten stages the gain is of the order of :

(A) 4^{10}

(B) 10^4

(C) 40

(D) $\dfrac{10!}{4!}$

34. A thin and hollow electrode is tapered and open at the end. The electrode is filled with an electrolyte. The electrode is put in an electrolyte bath. The tip will have :

(A) A very high resistance only

(B) A very low resistance only

(C) A high resistance with capacitance

(D) A low resistance with capacitance

35. Best vacuum that can be obtained with a rotary pump is :

(A) 10^{-3} Torr

(B) 10 Torr

(C) 10^{-6} Torr

(D) 10^{-10} Torr
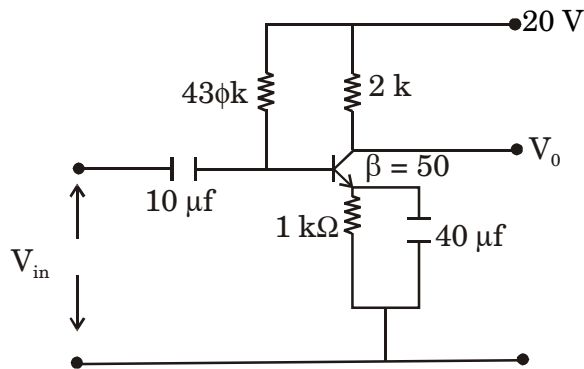
36. Precise value of $e/\hbar$ can be obtained by :

(A) Millikan's oil drop method

(B) Compton effect

(C) Michelson interferrometer

(D) Superconducting quantum interference device

37. What is the output for the following circuit ?
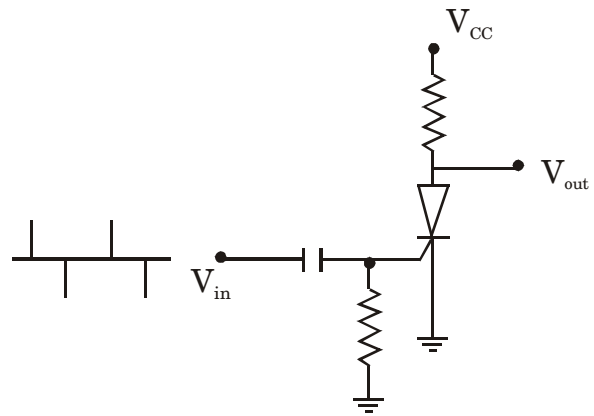
(A) Square wave

(B) Triangular wave

(C) Sawtooth

(D) Sine wave

38. Find out the value of I_B and V_C in the following circuit :

    (A) 43 μA and 11.4 V

    (B) 50 μA and 10 V

    (C) 40 μA and 16 V

    (D) 45 μA and 11 V

39. In which of the following ADC the speed of conversion is maximum :

    (A) Successive-approximation ADC

    (B) Counter-type ADC

    (C) Dual-slope type ADC
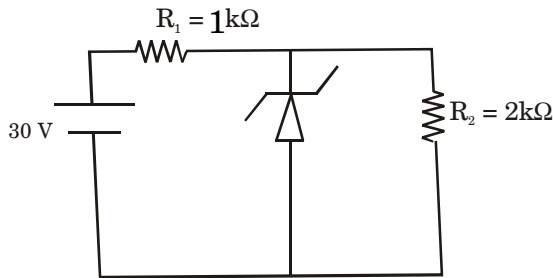
    (D) Parallel-comparator ADC

40. Which of the following interrupts is un-maskable interrupt ?

    (A) RST 5.5

    (B) RST 7.5

    (C) TRAP

    (D) INTR 1

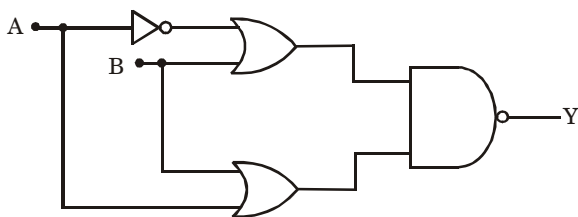41. To send digital data over telephone lines, the modulation technique used is :

    (A) AM

    (B) FM

    (C) FSK

    (D) Z-modulation

42. In the given circuit the current through resistor R_2(2 kΩ) is :
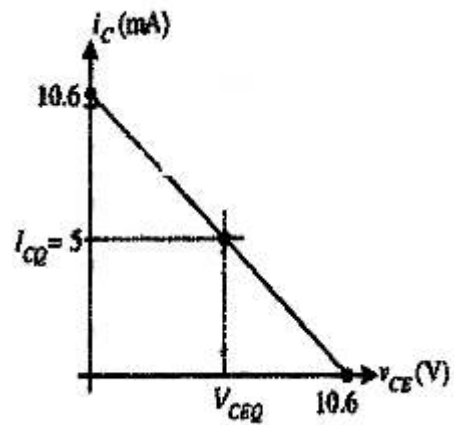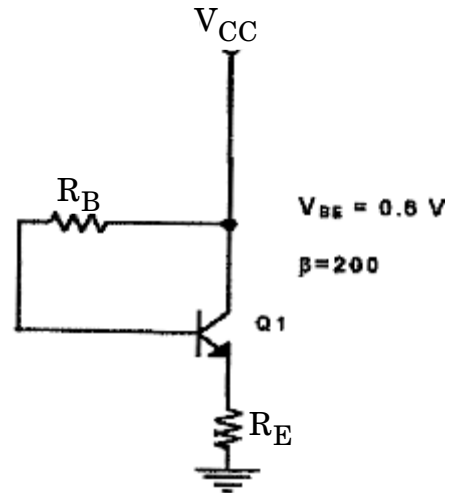
R₁ = 1kΩ

30 V

R_2 = 2kΩ

(A) 2 mA

(B) 15 mA

(C) 10 mA

(D) 6 mA

43. In the given digital logic circuit, A and B form the inputs. The output Y is :

A

B

Y

(A) $Y = \overline{A}$

(B) $Y = A\overline{B}$

(C) $Y = A \oplus B$

(D) $Y = \overline{B}$

44. Find the values of V_{CC}, R_B and R_E in the following circuit :

V_{CC}

R_B

V_{BE} = 0.6 V

β=200

Q1

R_E

i_c (mA)

10.6

I_{CQ}= 5

V_{CEQ} 10.6 v_{CE}(V)

(A) V_{CC} = 10 V, R_B = 200 kΩ, R_E = 1 kΩ

(B) V_{CC} = 10.6 V, R_B = 200 Ω, R_E = 1 kΩ

(C) V_{CC} = 10.6 V, R_B = 200 kΩ, R_E = 1 kΩ

(D) V_{CC} = 10 V, R_E = 1 kΩ, R_B = 200 kΩ

45. In op-amp zero crossing detector :

   (A) output of comparator is zero

   (B) $-V_{CC} = 0$

   (C) Reference voltage is zero

   (D) $+V_{CC} = 0$

46. The following circuit acts as :
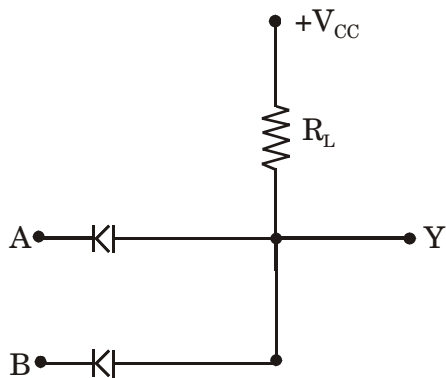
   (A) AND

   (B) OR

   (C) NOT

   (D) NAND

47. Consider a planar ion CO_3^{2-}. How many normal modes of vibration this ion will exhibit ?

   (A) 6

   (B) 7

   (C) 4

   (D) 12

48. For 1s and 2s states of the hydrogen atom, the all points is space at which the corresponding wave functions vanish is :

	1s	2s
(A)	∞	$r = 2a_0$ and ∞
(B)	0	$r = a_0,\ \infty$
(C)	$r = a_0$	∞
(D)	∞	0

49. Give functional form of the variation of the potential energy with the separation r between a neutral atom and an ion :

(A) $\dfrac{-1}{r}$

(B) $\dfrac{1}{r^{12}} - \dfrac{1}{r^6}$

(C) $\dfrac{-1}{r^2}$

(D) $\dfrac{-1}{r^3}$

50. A molecule can be infrared active provided a mode of vibration produces :

(A) a change in magnetic dipole moment

(B) a change in polarizability

(C) a change in electric dipole moment

(D) a change in quadrupole moment

51. A light source of wavelength 4358 Å is used to irradiate an organic liquid giving 3 Raman lines at 4400, 4419 and 4447 Å. The 'Raman Shift' of 4447 Å line will be :

(A) 219 cm^{-1}

(B) 316.8 cm^{-1}

(C) 345.2 cm^{-1}

(D) 459.2 cm^{-1}

52. Distance between two protons in a hydrogen molecule is :

(A) 1 nm

(B) 0.1 nm

(C) 0.01 nm

(D) 0.001 nm

53. State the quantum numbers for the ground state of neutral boron (atomic number 5).

(A) $^2P_{1/2}$

(B) $^1S_0$

(C) $^2S_0$

(D) $^3D_{1/2}$

54. Give the formula and the numerical value in meters, for the radius of the first Bohr orbit in hydrogen atom :

(A) $\dfrac{\hbar}{mc} = 3.8 \times 10^{-13}$ meters

(B) $\dfrac{\hbar}{mc} = 1.4 \times 10^{-15}$ meters

(C) $\dfrac{\hbar^2}{me^2} = 5.3 \times 10^{-11}$ meters

(D) $\dfrac{\hbar}{p} = 2 \times 10^{-17}$ meters

55. Alpha particles and protons of the same kinetic energy are passed through a gold foil. What is the ratio of their Coulomb scattering intensity ?

(A) 2

(B) 3

(C) 3/2

(D) 4

56. What is the ground state binding energy of an atom consisting of an electron and a positron bound to each other by their Coulomb interaction ?

(A) 13.6 eV

(B) 6.8 eV

(C) 8 eV

(D) 20.2 eV

57. If the first reflection from an f_{cc} crystal has a Bragg angle θ of 21.5°, the second reflection will have an angle θ of :

(A) 18.5°

(B) 25.0°

(C) 31.0°

(D) 47.13°

58. One of the following is a non-polar molecule :

(A) HCl

(B) CO_2

(C) H_2O

(D) HF

59. A rare earth ion has a ground state described by a basic level $^5I_8$. The maximum value of the orbital angular momentum L according to Hund rules is :

(A) 3

(B) 4

(C) 5

(D) 6

60. For Al, critical magnetic field at absolute zero is 105 gauss. The stabilization energy density of the superconducting Al wire in erg/cm^3 is :

(A) 530.00

(B) 320.00

(C) 439.00

(D) 100.00

61. In a semiconductor the effective mass of a hole near the top of valence band is :

(A) positive

(B) negative

(C) zero

(D) pure imaginary

62. The plot of the energy momentum relation for free electrons has the shape of :

(A) A rectangular hyperbola

(B) An ellipse

(C) A circle

(D) A parabola

63. The magnetisation of inside a type I superconductor at temperatures T below the critical temperature T_c behaves :

(A) linearly as a function of the applied field H, upto the critical field H_C

(B) is a non-zero constant as a function of H, upto the critical field H_C

(C) is identically zero upto the critical field H_C

(D) shows parabolic behaviour upto H_C and shows a gap above H_C

64. In an experiment of photoelectric effect, monochromatic X-rays are incident on the surface of a metal. Some of the resulting photoemitted electrons do not lose energy in escaping the surface and they leave the metal surface with a certain kinetic energy. If ϕ is the work-function of the metal, $h\upsilon$ the photon energy and E is the binding energy (depth below the Fermi level from which the electron originates), the kinetic energy of the electron will be :

(A) K.E. = $h\upsilon$ + E − ϕ

(B) K.E. = $h\upsilon$ − E + ϕ

(C) K.E. = $h\upsilon$ − E − ϕ

(D) K.E. = $h\upsilon$ + E + ϕ

65. When a beam of electron is reflected from a solid Aluminum surface, it is found that the electrons lose energy in discrete amounts of 15, 31 and 46 eV. Assuming the ideal electron gas model to be valid, the losses must be due to :

(A) plasma oscillations

(B) valence electron excitations

(C) core electron excitations

(D) generation of photoelectrons

66. Which of the following is *not* true in connection with the nuclear force ?

(A) Nuclear force is short-ranged

(B) Nuclear force is charge independent

(C) Nuclear force is spin-dependent

(D) The proton-proton force is stronger than the neutron-neutron force

67. The ratio of sizes (radii) of $^{208}_{82}$Pb and $^{26}_{12}$Mg is approximately.

(A) 2

(B) 4

(C) 8

(D) 7

68. Which of the following is *not* a doubly magic nucleus ?

(A) $^{16}_{8}$O

(B) $^{40}_{20}$Ca

(C) $^{208}_{82}$Pb

(D) $^{238}_{92}$U

69. A nucleus with mass number 204 decays by α-emission. The Q-value of the reaction is 5.26 MeV. The kinetic energy of the α-particle is :

(A) 5.26 MeV

(B) 2.63 MeV

(C) $5.26 \times \dfrac{200}{204}$ MeV

(D) $5.26 \times \dfrac{4}{204}$ MeV

$u\bar{d}$

70. Which of the following is violated by a β-decay phenomenon ?

   (A) Energy conservation

   (B) Momentum conservation

   (C) Angular momentum conservation

   (D) Parity conservation

71. The nuclear fission due to an absorption of a slow neutron is an example of :

   (A) Compound nuclear reaction

   (B) Direct reaction

   (C) Neutron scattering reaction

   (D) Quantum mechanical tunneling

72. Which of the following reactions is allowed one ?

   (A) $P + P \rightarrow k^+ + \Sigma^+$

   (B) $P + P \rightarrow k^+ + P + \wedge^0$

   (C) $\pi^- + P \rightarrow \Sigma^+ + K^0$

   (D) $\pi^- + P \rightarrow \pi^0 + \wedge^0$

73. The quark structure of π^+ is :

   (A) uu

   (B) $\bar{u}d$

   (C) dd

   (D)

74. The symmetry term in the semi-empirical mass formula is due to :

   (A) non-equality of proton number Z and neutron number N

   (B) non-spherical shape of nuclei

   (C) charge-independence of nuclear force

   (D) non-zero value of quadrupole moment of nuclei

75. α-particles of energy 5 MeV passing through an ionisation chamber completely lose their energy. Assuming that 35 eV of energy is required to produce one ion pair, find the height of the output pulse, if the capacity of the system is 10 μμf.

   (A) 2.85×10^{-3} volts

   (B) 3.2×10^{-3} volts

   (C) 2.24×10^{-3} volts

   (D) 3.4×10^{-3} volts

ROUGH WORK

Test Booklet No.
प्रश्नपत्रिका क्र.

M

Paper-III
PHYSICS

Signature and Name of Invigilator

1. (Signature) ....

   (Name) ....

2. (Signature) ....

   (Name) ....

FEB - 32313

Time Allowed : 2½ Hours]

Number of Pages in this Booklet : **20**

Seat No.

(In figures as in Admit Card)

Seat No. ....

(In words)

OMR Sheet No.

(To be filled by the Candidate)

[Maximum Marks : 150

Number of Questions in this Booklet : **75**

Instructions for the Candidates	**विद्यार्थ्यांसाठी महत्त्वाच्या सूचना**
1. Write your Seat No. and OMR Sheet No. in the space provided on the top of this page.	1. परिक्षार्थींनी आपला आसन क्रमांक या पृष्ठावरील वरच्या कोप-यात लिहावा. तसेच आपणांस दिलेल्या उत्तरपत्रिकेचा क्रमांक त्याखाली लिहावा.
2. This paper consists of **75** objective type questions. Each question will carry *two* marks. *All* questions of Paper-III will be compulsory, covering entire syllabus (including all electives, without options).	2. सदर प्रश्नपत्रिकेत 75 बहुपर्यायी प्रश्न आहेत. प्रत्येक प्रश्नास **दोन** गुण आहेत. या प्रश्नपत्रिकेतील **सर्व** प्रश्न सोडविणे अनिवार्य आहे. सदरचे प्रश्न हे या विषयाच्या संपूर्ण अभ्यासक्रमावर आधारित आहेत.
3. At the commencement of examination, the question booklet will be given to the student. In the first 5 minutes, you are requested to open the booklet and compulsorily examine it as follows :	3. परीक्षा सुरू झाल्यावर विद्यार्थ्याला प्रश्नपत्रिका दिली जाईल. सुरुवातीच्या 5 मिनीटांमध्ये आपण सदर प्रश्नपत्रिका उघडून खालील बाबी आवश्य तपासून पहाव्यात.
(*i*) To have access to the Question Booklet, tear off the paper seal on the edge of this cover page. Do not accept a booklet without sticker-seal or open booklet.	(*i*) प्रश्नपत्रिका उघडण्यासाठी प्रश्नपत्रिकेवर लावलेले सील उघडावे. सील नसलेली किंवा सील उघडलेली प्रश्नपत्रिका स्विकारू नये.
(*ii*) **Tally the number of pages and number of questions in the booklet with the information printed on the cover page. Faulty booklets due to missing pages/ questions or questions repeated or not in serial order or any other discrepancy should not be accepted and correct booklet should be obtained from the invigilator within the period of 5 minutes. Afterwards, neither the Question Booklet will be replaced nor any extra time will be given. The same may please be noted.**	(*ii*) **पहिल्या पृष्ठावर नमूद केल्याप्रमाणे प्रश्नपत्रिकेची एकूण पृष्ठे तसेच प्रश्नपत्रिकेतील एकूण प्रश्नांची संख्या पडताळून पहावी. पृष्ठे कमी असलेली/कमी प्रश्न असलेली/प्रश्नांचा चूकीचा क्रम असलेली किंवा इतर त्रुटी असलेली सदोष प्रश्नपत्रिका सुरुवातीच्या 5 मिनिटातच पर्यवेक्षकाला परत देऊन दुसरी प्रश्नपत्रिका मागवून घ्यावी. त्यानंतर प्रश्नपत्रिका बदलून मिळणार नाही तसेच वेळही वाढवून मिळणार नाही याची कृपया विद्यार्थ्यांनी नोंद घ्यावी.**
(*iii*) After this verification is over, the OMR Sheet Number should be entered on this Test Booklet.	(*iii*) वरीलप्रमाणे सर्व पडताळून पहिल्यानंतरच प्रश्नपत्रिकेवर ओ.एम.आर. उत्तरपत्रिकेचा नंबर लिहावा.
4. Each question has four alternative responses marked (A), (B), (C) and (D). You have to darken the circle as indicated below on the correct response against each item. **Example :** where (C) is the correct response.	4. प्रत्येक प्रश्नासाठी (A), (B), (C) आणि (D) अशी चार विकल्प उत्तरे दिली आहेत. त्यातील योग्य उत्तराचा रकाना खाली दर्शविल्याप्रमाणे ठळकपणे काळा/निळा करावा. **उदा. :** जर (C) हे योग्य उत्तर असेल तर.
(A) (B) ● (D)	(A) (B) ● (D)
5. Your responses to the items are to be indicated in the **OMR Sheet given inside the Booklet only.** If you mark at any place other than in the circle in the OMR Sheet, it will not be evaluated.	5. या प्रश्नपत्रिकेतील प्रश्नांची उत्तरे **ओ.एम.आर. उत्तरपत्रिकेतच दर्शवावीत.** इतर ठिकाणी लिहीलेली उत्तरे तपासली जाणार नाहीत.
6. Read instructions given inside carefully.	6. आत दिलेल्या सूचना काळजीपूर्वक वाचाव्यात.
7. Rough Work is to be done at the end of this booklet.	7. प्रश्नपत्रिकेच्या शेवटी जोडलेल्या कोऱ्या पानावरच कच्चे काम करावे.
8. If you write your Name, Seat Number, Phone Number or put any mark on any part of the OMR Sheet, except for the space allotted for the relevant entries, which may disclose your identity, or use abusive language or employ any other unfair means, you will render yourself liable to disqualification.	8. जर आपण ओ.एम.आर. वर नमूद केलेल्या ठिकाणा व्यतिरीक्त इतर कोठेही नाव, आसन क्रमांक, फोन नंबर किंवा ओळख पटेल अशी कोणतीही खूण केलेली आढळून आल्यास अथवा असभ्य भाषेचा वापर किंवा इतर गैरमार्गाचा अवलंब केल्यास विद्यार्थ्याला परीक्षेस अपात्र ठरविण्यात येईल.
9. You have to return original OMR Sheet to the invigilator at the end of the examination compulsorily and must not carry it with you outside the Examination Hall. You are, however, allowed to carry the Test Booklet and duplicate copy of OMR Sheet on conclusion of examination.	9. परीक्षा संपल्यानंतर विद्यार्थ्याने मूळ ओ.एम.आर. उत्तरपत्रिका पर्यवेक्षकांकडे परत करणे आवश्यक आहे. तथापि, प्रश्नपत्रिका व ओ.एम.आर. उत्तरपत्रिकेची द्वितीय प्रत आपल्याबरोबर नेण्यास विद्यार्थ्यांना परवानगी आहे.
10. **Use only Blue/Black Ball point pen.**	10. **फक्त निळ्या किंवा काळ्या बॉल पेनाचाच वापर करावा.**
11. **Use of any calculator or log table, etc., is prohibited.**	11. **कॅल्क्युलेटर किंवा लॉग टेबल वापरण्यास परवानगी नाही.**
12. **There is no negative marking for incorrect answers.**	12. **चुकीच्या उत्तरासाठी गुण कपात केली जाणार नाही.**