Roll. No. ....

O.M.R. Serial No. | | | | | | | | |

Question Booklet Number

M.Sc. (SEM.-III) (NEP) (SUPPLE.)EXAMINATION, 2024-25

PHYSICS

(Quantum Mechanics-II)

Paper Code							
B	0	1	0	9	0	2	T

Question Booklet Series

A

Time : 1 : 30 Hours **Max. Marks : 75**

Instructions to the Examinee :

1. Do not open the booklet unless you are asked to do so.
2. The booklet contains 100 questions. Examinee is required to answer 75 questions in the OMR Answer-Sheet provided and not in the question booklet. All questions carry equal marks.
3. Examine the Booklet and the OMR Answer-Sheet very carefully before you proceed. Faulty question booklet due to missing or duplicate pages/questions or having any other discrepancy should be got immediately replaced.
4. Four alternative answers are mentioned for each question as - A, B, C & D in the booklet. The candidate has to choose the correct / answer and mark the same in the OMR Answer-Sheet as per the direction :

(Remaining instructions on last page)

परीक्षार्थियों के लिए निर्देश :

1. प्रश्न-पुस्तिका को तब तक न खोलें जब तक आपसे कहा न जाए।
2. प्रश्न-पुस्तिका में 100 प्रश्न हैं। परीक्षार्थी को 75 प्रश्नों को केवल दी गई OMR आन्सर-शीट पर ही हल करना है, प्रश्न-पुस्तिका पर नहीं। सभी प्रश्नों के अंक समान हैं।
3. प्रश्नों के उत्तर अंकित करने से पूर्व प्रश्न-पुस्तिका तथा OMR आन्सर-शीट को सावधानीपूर्वक देख लें। दोषपूर्ण प्रश्न-पुस्तिका जिसमें कुछ भाग छपने से छूट गए हों या प्रश्न एक से अधिक बार छप गए हों या उसमें किसी अन्य प्रकार की कमी हो, उसे तुरन्त बदल लें।
4. प्रश्न-पुस्तिका में प्रत्येक प्रश्न के चार सम्भावित उत्तर- A, B, C एवं D हैं। परीक्षार्थी को उन चारों विकल्पों में से सही उत्तर छाँटना है। उत्तर को OMR उत्तर-पत्रक में सम्बन्धित प्रश्न संख्या में निम्न प्रकार भरना है :

(शेष निर्देश अन्तिम पृष्ठ पर)

1. What is studied by Stationary Perturbation theory?
   (A) Time evaluation of the system
   (B) Wave packet spreading
   (C) Energy corrections of a perturbed Hamiltonian
   (D) Scattering states

2. In non-degenerate stationary perturbation theory, the first order correction to the energy in the nth state is given by :
   (A) $E_n^{(0)} = \langle \psi_n^{(0)} | H' | \psi_n^{(0)} \rangle$
   (B) $E_n^{(1)} = \langle \psi_n^{(0)} | H' | \psi_n^{(0)} \rangle$
   (C) $E_n^{(1)} = \langle \psi_n^{(1)} | H' | \psi_n^{(1)} \rangle$
   (D) $E_n^{(1)} = \langle \psi_n^{(0)} | H' | \psi_n^{(1)} \rangle$

3. The small parameter λ in perturbation theory ensures:
   (A) Degeneracy of levels
   (B) Exact solvability of perturbed Hamiltonian
   (C) Convergence of series expansion
   (D) Orthogonality of perturbed state

4. The second order energy correction for the nth state in non –degenerate case is given by :
   (A) $\sum_{m \neq n} = \dfrac{\left|\langle \psi_m^0 | H' | \psi_n^0 \rangle\right|^2}{\langle E_n^0 - E_m^0 \rangle}$
   (B) Infinite
   (C) 0
   (D) $\langle \psi_n^{(0)} | H' | \psi_n^{(1)} \rangle$

5. The necessary condition for perturbation theory to remain valid.
   (A) $H' >> H_0$
   (B) $H' \approx H_0$
   (C) $H' << H_0$
   (D) None of the above

6. Which of the following physical effects is commonly analyzed through non-degenerate perturbation theory ?
   (A) Spin orbit coupling in multi electron atom
   (B) Normal Zeeman effect (for non-degenarate hydrogen levels)
   (C) Stark effect in hydrogen (n=2 level)
   (D) All of the above

7. Which of the following is an application of time- independent perturbation theory?
   (A) Fine structure of hydrogen atom
   (B) Stark effect
   (C) Zeeman effect
   (D) All of the above

8. An example where non-degenerate perturbation theory is applied :

(A) Degeneracy lifting in p - orbitals

(B) Exchange interaction in He atom

(C) Stark effect in hydrogen (n=2 level)

(D) Fine structure of hydrogen atom (spin–orbit coupling)

9. Degenerate perturbation theory is needed when:

(A) No perturbation exists

(B) All states have different energies.

(C) Two or more states have the same unperturbed energy.

(D) Energy levels are equally spaced.

10. When using relativistic correction, the ground state energy for hydrogen atom (Z=1) without spin orbit interaction is :

(A) $E_n = E_n^{(0)}\left[1+\frac{\alpha^2}{n}\left(\frac{2}{2l+1}-\frac{3}{4n}\right)\right]$

(B) $E_n = E_n^{(0)}\left[1-\frac{\alpha^2}{n}\left(\frac{2}{2l+1}-\frac{3}{4n}\right)\right]$

(C) 1

(D) Zero

11. In degenerate perturbation theory, the perturbation Hamiltonian is diagonalized in :

(A) only the degenerate subspace.

(B) the entire set of eigenfunctions.

(C) momentum representation.

(D) All of the above

12. Which is a correct statement ?

(A) All states remain degenerate.

(B) Degenerate Perturbation Theory is independent of perturbation strength.

(C) In degenerate Perturbation Theory, only diagonal elements of (H') matter.

(D) Off-diagonal elements of (H') in the degenerate subspace determine splitting.

13. When the perturbation Hamiltonian is already diagonal in the degenerate basis, the energy correction :

(A) cannot be determined

(B) is given by the diagonal elements.

(C) is zero

(D) is infinite

14. When two degenerate states are mixed by perturbation, the energy eigenstates are:
   (A) always degenerate
   (B) unchanged eigenstates of H_0
   (C) symmetric and antisymmetric linear combinations
   (D) purely diagonal states

15. According to the variational principle, the expectation value of energy for a trial wave function is always :
   (A) arbitrary
   (B) equal to the average energy
   (C) greater than or equal to the true ground state energy
   (D) less than the ground state energy

16. The variational method is useful when:
   (A) System is classical
   (B) No perturbation exists
   (C) Exact solutions are available
   (D) Hamiltonian is unsolvable exactly

17. The accuracy of the variational method depends on:
   (A) The normalization constant
   (B) Number of eigenvalues calculated
   (C) Choice of trial wave function
   (D) Order of perturbation

18. Another name of variational method is:
   (A) Rayleigh–Ritz method
   (B) Perturbation theory
   (C) WKB approximation
   (D) Born approximation

19. The variational energy is given by :
   (A) $E = \langle \psi | H' | \psi \rangle$
   (B) $E = \langle \psi | H_0 | \psi \rangle$
   (C) $E = \langle \psi | H | \psi \rangle$
   (D) $E = \langle \psi | \psi \rangle$

20. Variational method is not suitable for:
   (A) Systems without exact solutions
   (B) Helium atom energy calculation
   (C) Ground states
   (D) Estimation of exact eigenfunctions

21. Using variational method, the estimated ground state energy of Helium is:
   (A) Positive
   (B) Exactly –79 eV
   (C) Much lower than –79 eV
   (D) Close to –79 eV but slightly higher

22. The trial wave function must satisfy:
(A) Normalization only
(B) Boundary conditions only
(C) Both normalization and boundary conditions
(D) No condition

23. The essential distinction that separates perturbation theory from the variational approach is :
(A) Perturbation gives upper bound, variational gives lower bound
(B) Variational needs degeneracy
(C) Both give exact results
(D) Perturbation expands in series, variational minimizes expectation value

24. The WKB approximation method is applied to :
(A) Dirac equation
(B) Maxwell's equations
(C) Time-dependent Schrodinger equation
(D) Time-independent Schrodinger equation

25. The full form of WKB is :
(A) Wien–Kelvin–Boltzmann
(B) Wentzel–Kramers–Born
(C) Wigner–Klein–Bessel
(D) Wentzel–Kramers–Brillouin

26. In the classically forbidden region, the WKB wave function tends to:
(A) becomes zero
(B) becomes infinite
(C) oscillate
(D) exponentially decay or grow

27. What is the requisite condition for the validity of the WKB approximation?
(A) $\frac{dV}{dx} = 0$
(B) $\left|\frac{d\lambda}{dx}\right| << 1$
(C) $E = V(x)$
(D) $\left|\frac{d\lambda}{dx}\right| >> 1$

28. The WKB quantization condition is expressed as :
(A) $\int p\,(x)\,dx = nh$
(B) $\int p\,(x)\,dx = n\hbar$
(C) $\int p\,(x)\,dx = (n + \frac{1}{2})\,h$
(D) $\int p\,(x)\,dx = (n+1)\,h$

29. The Gamow theory of alpha decay is based on :
(A) Perturbation method
(B) Exact quantum solution
(C) Variational method
(D) WKB approximation

30. WKB approximation method is also called :
(A) Relativistic method
(B) Exact variational method
(C) Semi-classical approximation
(D) Plane-wave method

31. The state of the system in time-dependent perturbation theory is expressed as :
(A) Only ground state
(B) Normalized plane wave
(C) Linear combination of unperturbed eigenstates
(D) Constant eigenstate

32. In Time dependent perturbation theory, the probability of transition depends on :
(A) Always constant
(B) Only initial energy
(C) Only energy difference
(D) Strength and frequency of perturbation

33. In first-order time dependent perturbation theory , the transition probability grows as :
(A) for small times
(B) linear in time
(C) exponential decay
(D) constant

34. Time dependent perturbation theory explains which of the following ?
(A) Bohr radius
(B) Exact hydrogen atom spectrum
(C) Atomic transitions under Electromagnetic field
(D) Free particle scattering

35. The sudden approximation applies when :
(A) Perturbation is constant
(B) Perturbation changes very slowly
(C) Perturbation changes very rapidly
(D) Perturbation is periodic

36. If perturbation is sinusoidal, resonance occurs when :
(A) $\hbar\omega = E_f + E_i$
(B) $\hbar\omega = E_f - E_i$
(C) $\hbar\omega = 0$
(D) $\hbar\omega = 1$

37. The adiabatic approximation applies when :
(A) Perturbation is sinusoidal
(B) Perturbation is very slow compared to system's response
(C) Perturbation is very fast
(D) Perturbation is impulsive

38. Absorption and Emission occurs respectively when :
(A) $\hbar\omega = E_f - E_i$ *and* $\hbar\omega = E_i - E_f$
(B) $\hbar\omega = E_i - E_f$ *and* $\hbar\omega = E_f - E_i$
(C) $E_f = E_i$ *and* $E_i = E_f$
(D) None of these

39. Fermi's Golden Rule gives :
(A) Ground state energy
(B) Perturbation correction
(C) Transition rate per unit time
(D) Exact transition probability

40. Mathematical expression of Fermi's Golden Rule is:

(A) $W_{i\to f} = \frac{H_0}{\hbar}$

(B) $W_{i\to f} = \frac{1}{2}|H'|$

(C) $W_{i\to f} = \frac{2\pi}{\hbar}|H'_{fi}|^2 \rho(E_f)$

(D) $W_{i\to f} = E_f - E_i$

41. The proportionality factor $\frac{2\pi}{\hbar}$ in Fermi Golden rule arises from :

(A) Fourier transform of time-dependent perturbation

(B) Energy conservation delta function

(C) Normalization of wavefunction

(D) Classical approximation

42. If the density of states $\rho(E)$ in Fermi Golden rule increases, the transition rate :

(A) becomes zero

(B) remains constant

(C) increases

(D) decreases

43. Which physical principle underlies Fermi's Golden Rule ?

(A) Adiabatic theorem

(B) WKB approximation

(C) Energy quantization

(D) Time-dependent perturbation theory

44. The photoelectric effect transition rate can be derived using :

(A) Fermi's Golden Rule

(B) Adiabatic theorem

(C) WKB approximation

(D) Variational method

45. In solid-state physics, Fermi's Golden Rule is extensively used to compute :

(A) Lattice constant

(B) Scattering rates (electron–phonon, electron–impurity)

(C) Bohr magnetron

(D) Band structure of crystals

46. The lifetime of an excited atomic state is inversely proportional to :

(A) $|H'_{fi}|^2$

(B) Transition rate from Fermi's Golden Rule

(C) Density of final photon state $\rho(E)$

(D) All of the above

47. Which process is not explained by semi-classical theory?

(A) Resonance absorption

(B) Spontaneous emission

(C) Stimulated emission

(D) Stimulated absorption

48. In semi-classical theory, the transition probability depends on :

(A) Matrix elements of dipole operator

(B) Frequency of applied field

(C) Intensity of applied field

(D) All of the above

49. According to Fermi's Golden Rule in semi-classical theory, the transition rate is proportional to :
   (A) Density of states
   (B) Square of applied electric field amplitude
   (C) Square of dipole matrix element
   (D) All of the above

50. Semi-classical theory predicts line broadening in absorption spectra due to:
   (A) Lifetime of excited states
   (B) Interaction with radiation field
   (C) Damping of oscillations
   (D) All of the above

51. Semi-classical theory of radiation fails when :
   (A) High-frequency resonance fields observed
   (B) Field has to be quantized (vacuum fluctuations matter)
   (C) Coherent states are used
   (D) Low-intensity fields present

52. In non-relativistic quantum scattering, the incoming particle is described by:
   (A) Exponential wave
   (B) Plane wave
   (C) Standing wave
   (D) Spherical wave

53. The scattered particle wavefunction at large distances is given by :
   (A) $e^{i\vec{k}\cdot\vec{r}}$
   (B) $f(\theta,\phi)\dfrac{e^{ik\vec{r}}}{r}$
   (C) $\dfrac{e^{-ik\vec{r}}}{r}$
   (D) $\dfrac{\cos(kr)}{r}$

54. The differential scattering cross-section is expressed in terms of the scattering amplitude :
   (A) $\dfrac{d\sigma}{d\Omega}=|\psi|^2$
   (B) $\dfrac{d\sigma}{d\Omega}=|f(\theta,\phi)|^2$
   (C) $\dfrac{d\sigma}{d\Omega}=f(\theta,\phi)/r$
   (D) $\dfrac{d\sigma}{d\Omega}=\dfrac{|f(\theta,\phi)|^2}{r}$

55. The total scattering cross-section is obtained by :
   (A) Square of scattering length
   (B) Multiplying scattering amplitude by radius
   (C) Phase shift difference
   (D) Integration of differential cross-section over solid angle

56. The scattering amplitude in partial wave analysis is :
   (A) $f(\theta)=\sum_1(2l+1)f_1P_1(\cos\theta)$
   (B) $f(\theta)=\dfrac{\sin\theta}{\theta}$
   (C) $f(\theta)=\dfrac{e^{ikr}}{r}$
   (D) $f(\theta)=e^{ikr}$

57. The partial wave phase shift δ_l represents:

(A) Angular momentum quantization

(B) Probability density

(C) Energy difference

(D) Effect of potential on l-th partial wave

58. For s-wave ((l=0)) scattering at low energy, the cross-section is approximately :

(A) $\sigma = \pi r^2$

(B) $\sigma = 4\pi a^2$

(C) $\sigma = \dfrac{a}{r}$

(D) $\sigma = 0$

59. In Rutherford scattering, the differential cross-section is proportional to :

(A) $\dfrac{1}{\cos^2(\theta/2)}$

(B) $\sin^2(\theta)$

(C) $\dfrac{1}{\sin^4(\theta/2)}$

(D) $\dfrac{1}{\sin^2(\theta/2)}$

60. The differential cross section has dimension of :

(A) Energy

(B) Solid angle

(C) Area

(D) Length

61. If $\dfrac{d\sigma}{d\Omega}$ is sharply peaked in the forward direction, then which of the following is correct statement ?

(A) Total cross-section is negligible

(B) Optical theorem fails

(C) Only backward scattering matters

(D) Total cross-section is dominated by forward scattering

62. The relation between partial wave phase shifts and total cross-section is :

(A) $\sigma_{total} = \dfrac{2}{k}\Sigma_l\, \delta_l$

(B) $\sigma_{total} = \dfrac{4\pi}{k^2}\Sigma_l\,(2l+1)\sin^2\delta_l$

(C) $\sigma_{total} = 4\pi a^2$

(D) $\sigma_{total} = \pi a^2$

63. Born approximation is valid when :

(A) Energy is low

(B) Phase shifts are large

(C) Potential is weak

(D) Potential is strong

64. In first Born approximation, the scattering amplitude is proportional to:

(A) Momentum operator

(B) Square of wavefunction

(C) Legendre polynomial

(D) Fourier transform of potential

65. For Coulomb scattering, Born approximation.............:

(A) vanishes

(B) diverges

(C) works perfectly

(D) None of these

66. The validity condition for Born approximation is :

(A) $V_0 >> E$

(B) $V_0 << E$

(C) $V_0 = E$

(D) $V_0 = 0$

67. For Coulomb scattering, the Born approximation:

(A) is always zero

(B) gives exact Rutherford formula

(C) diverges in the forward direction $(\theta \to 0)$

(D) is independent of angle

68. The failure of Born approximation for Coulomb potential is because of :

(A) Delta-function nature

(B) Low energy of particle

(C) Strong magnetic field

(D) Long-range nature of potential

69. Born approximation for Gaussian potential gives a finite scattering amplitude, the reason behind this is :

(A) Energy is zero

(B) Wavefunction is zero

(C) Potential is long-range

(D) Potential is short-range

70. Gaussian potential is generally used to model :

(A) Rutherford scattering

(B) Nuclear scattering

(C) Classical particle collisions

(D) Coulomb scattering

71. In Born approximation, the scattering amplitude for a square well depends on :

(A) Depth V_0 and radius a

(B) Only V_0

(C) Only a

(D) Only incident energy

72. The total cross-section in Born approximation for a spherical square well is proportional to :

(A) $V_0^2 a$

(B) $V_0^2 a^2$

(C) $V_0^2 a^4$

(D) $V_0^2 a^6$

73. In scattering, fourier transform of Yukawa potential gives :

(A) $\tilde{V}(q) \propto \frac{1}{q}$

(B) $\tilde{V}(q) \propto \frac{1}{q^2 + \mu^2}$

(C) $\tilde{V}(q) \propto e^{-q^2}$

(D) Zero

74. Yukawa potential is solution of:
   (A) Schrodinger equation for free particle
   (B) Klein- Gorden equation for massive boson exchange
   (C) Maxwell equation
   (D) Poission's equation for electrostatics

75. The Yukawa potential is mainly used to describe :
   (A) Electromagnetic interaction
   (B) Gravitational interaction
   (C) Nuclear interaction
   (D) Weak interaction only

76. In partial wave analysis, the scattering amplitude is expanded in terms of :
   (A) Plane waves
   (B) Fourier series
   (C) Exponentials only
   (D) Spherical harmonics and Legendre polynomials

77. The phase shift δ_1 arises due to :
   (A) Free particle motion
   (B) Boundary conditions at infinity only
   (C) Distortion of wavefunction by potential
   (D) Normalization of wavefunction

78. For a hard sphere potential of radius (a), the s-wave phase shift at low energy is approximately :
   (A) $\delta_0 = 0$
   (B) Infinite
   (C) $\delta_0 = \frac{\pi}{2}$
   (D) $\delta_0 \approx -ka$

79. The optical theorem states :
   (A) $\sigma_{tot} = |f(\pi)|^2$
   (B) $\sigma_{tot} = \frac{2\pi}{k} \operatorname{Im} |f(\pi)|^2$
   (C) $\sigma_{tot} = \frac{4\pi}{k} \operatorname{Im} [f(0)]$
   (D) $\sigma_{tot} = \frac{1}{r}$

80. The optical theorem is a consequence of :
   (A) Conservation of energy
   (B) Conservation of momentum
   (C) Conservation of probability (unitarity of S-matrix)
   (D) Fourier expansion

81. A resonance occurs when the phase shift δ_l :
   (A) equals zero
   (B) is negative
   (C) passes through $\pi/2$
   (D) diverges

82. If the square well supports a bound state near threshold, the scattering length becomes :
   (A) zero
   (B) always negative
   (C) very large (positive or negative)
   (D) independent of bound state

83. If (E >> V_0), the phase shift δ_l tends to :

(A) constant value

(B) infinite

(C) $\pi/2$

(D) zero

84. The relativistic energy-momentum relation is :

(A) $E = pc$

(B) $E = \dfrac{p^2}{2m}$

(C) $E^2 = p^2c^2 + m^2c^4$

(D) $E^2 = mc^2 + p^2c^2$

85. The Klein–Gordon equation describes the particle having spin :

(A) Does not depend on spin

(B) S=1

(C) S=1/2

(D) S=0

86. The Klein–Gordon equation is :

(A) Not Lorentz invariant

(B) First-order in time derivatives only

(C) First-order in space derivatives only

(D) Second-order in time and space derivatives

87. The Dirac equation predicts the existence of :

(A) electrons only

(B) Photons only

(C) Antiparticles

(D) Spin-0 bosons only

88. The Dirac equation reduces to the Pauli equation in :

(A) High energy limit

(B) Non-relativistic limit

(C) Infinite energy limit

(D) Massless particle limit

89. The Dirac equation correctly accounts for :

(A) Fine structure of hydrogen

(B) Spin-orbit coupling

(C) g-factor of electron

(D) All of the above

90. The intrinsic magnetic moment of electron according to Dirac is :

(A) $\mu = 0$

(B) $\mu = \dfrac{e\hbar}{2m}$

(C) $\mu = 2\dfrac{e\hbar}{2m}$

(D) $\mu = \dfrac{e\hbar}{m}$

91. The matrices α_i and β satisfy :

(A) $\left(\alpha_i, \alpha_j\right) = 2\delta_{ij}$

(B) $\left(\alpha_i, \beta\right) = 0$

(C) $\alpha_i^2 = \beta = I$

(D) All of the above

92. The anticommutation relation of Dirac matrices ensures :

(A) Spin-orbit coupling

(B) Lorentz invariance of Dirac equation

(C) Probability conservation

(D) Only scalar solutions

93. The plane-wave solution of the free Dirac equation can be written as :

(A) $\psi\,(r,t) = u(p)e^{i}\;(p\,.\,r - Et)\,/\,\hbar$

(B) $\psi = e^{-r^2}$

(C) $\psi = 0$

(D) $\psi = \cos\,(kx)$

94. Electron spin was experimentally discovered through :

(A) Stern–Gerlach experiment

(B) Zeeman effect

(C) Compton scattering

(D) Photoelectric effect

95. Bohr magneton formula is expressed as :

(A) $\mu_B = \frac{e^2}{\hbar}$

(B) $\mu_B = \frac{e\hbar}{4m_e}$

(C) $\mu_B = \frac{e\hbar}{2m_e}$

(D) $\mu_B = -\frac{e\hbar}{2m_e}$

96. The spin gyromagnetic factor of the electron is approximately :

(A) 0 (B) 1

(C) 2 (D) -1

97. The negative sign of electron magnetic moment indicates :

(A) It has no direction

(B) It cancels orbital contribution

(C) It aligns opposite to spin angular momentum

(D) It aligns parallel to spin

98. The spin magnetic moment of an electron is given by :

(A) $\mu_s = \hbar\omega$

(B) $\mu_s = g_s \mu_B S\,/\,\hbar$

(C) $\mu_s = \frac{e}{m} vr$

(D) $\mu_s = \frac{m}{e} vr$

99. In the non-relativistic limit, the Dirac equation reduces to :

(A) Maxwell equations

(B) Klein-Gordon equation

(C) Pauli equation

(D) Schrodinger equation

100. The Bohr magneton appears naturally in the non-relativistic reduction due to:

(A) Relativity

(B) Orbital quantization

(C) Darwin term

(D) Spin coupling to a magnetic field

ROUGH WORK

Example :

Question :

Q.1 Ⓐ ● Ⓒ Ⓓ

Q.2 Ⓐ Ⓑ ● Ⓓ

Q.3 Ⓐ ● Ⓒ Ⓓ

5. Each question carries equal marks. Marks will be awarded according to the number of correct answers you have.

6. All answers are to be given on OMR Answer Sheet only. Answers given anywhere other than the place specified in the answer sheet will not be considered valid.

7. Before writing anything on the OMR Answer Sheet, all the instructions given in it should be read carefully.

8. After the completion of the examination, candidates should leave the examination hall only after providing their OMR Answer Sheet to the invigilator. Candidate can carry their Question Booklet.

9. There will be no negative marking.

10. Rough work, if any, should be done on the blank pages provided for the purpose in the booklet.

11. To bring and use of log-book, calculator, pager & cellular phone in examination hall is prohibited.

12. In case of any difference found in English and Hindi version of the question, the English version of the question will be held authentic.

Impt. On opening the question booklet, first check that all the pages of the question booklet are printed properly. If there is any discrepancy in the question Booklet, then after showing it to the invigilator, get another question Booklet of the same series.

उदाहरण :

प्रश्न :

प्रश्न 1 Ⓐ ● Ⓒ Ⓓ

प्रश्न 2 Ⓐ Ⓑ ● Ⓓ

प्रश्न 3 Ⓐ ● Ⓒ Ⓓ

5. प्रत्येक प्रश्न के अंक समान हैं। आपके जितने उत्तर सही होंगे, उन्हीं के अनुसार अंक प्रदान किये जायेंगे।

6. सभी उत्तर केवल ओ०एम०आर० उत्तर-पत्रक (OMR Answer Sheet) पर ही दिये जाने हैं। उत्तर-पत्रक में निर्धारित स्थान के अलावा अन्यत्र कहीं पर दिया गया उत्तर मान्य नहीं होगा।

7. ओ०एम०आर० उत्तर-पत्रक (OMR Answer Sheet) पर कुछ भी लिखने से पूर्व उसमें दिये गये सभी अनुदेशों को सावधानीपूर्वक पढ़ लिया जाये।

8. परीक्षा समाप्ति के उपरान्त परीक्षार्थी कक्ष निरीक्षक को अपनी OMR Answer Sheet उपलब्ध कराने के बाद ही परीक्षा कक्ष से प्रस्थान करें। परीक्षार्थी अपने साथ प्रश्न-पुस्तिका ले जा सकते हैं।

9. निगेटिव मार्किंग नहीं है।

10. कोई भी रफ कार्य, प्रश्न-पुस्तिका में, रफ-कार्य के लिए दिए खाली पेज पर ही किया जाना चाहिए।

11. परीक्षा-कक्ष में लॉग-बुक, कैल्कुलेटर, पेजर तथा सेल्युलर फोन ले जाना तथा उसका उपयोग करना वर्जित है।

12. प्रश्न के हिन्दी एवं अंग्रेजी रूपान्तरण में भिन्नता होने की दशा में प्रश्न का अंग्रेजी रूपान्तरण ही मान्य होगा।

महत्वपूर्णः प्रश्नपुस्तिका खोलने पर प्रथमतः जाँच कर देख लें कि प्रश्नपुस्तिका के सभी पृष्ठ भलीभाँति छपे हुए हैं। यदि प्रश्नपुस्तिका में कोई कमी हो, तो कक्षनिरीक्षक को दिखाकर उसी सिरीज की दूसरी प्रश्नपुस्तिका प्राप्त कर लें।