



UNIVERSITY OF MYSORE

Postgraduate Entrance Examination June/July 2017

SUBJECT CODE : **6 1**

| Entrance Reg. No. | | | | |
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QUESTION BOOKLET NO.

121015

QUESTION BOOKLET

(Read carefully the instructions given in the Question Booklet)

COURSE : **M.Sc.**

SUBJECT : **Physics**

MAXIMUM MARKS : 50

MAXIMUM TIME : ONE HOUR

(Including initial 10 minutes for filling O.M.R. Answer sheet)

INSTRUCTIONS TO THE CANDIDATES

1. The sealed questions booklet containing 50 questions enclosed with O.M.R. Answer Sheet is given to you.
2. Verify whether the given question booklet is of the same subject which you have opted for examination.
3. Open the question paper seal carefully and take out the enclosed O.M.R. Answer Sheet outside the question booklet and fill up the general information in the O.M.R. Answer sheet. If you fail to fill up the details in the form of alphabet and signs as instructed, you will be personally responsible for consequences arising during scoring of your Answer Sheet.
4. During the examination:
 - a) Read each question carefully.
 - b) Determine the Most appropriate/correct answer from the four available choices given under each question.
 - c) Completely darken the relevant circle against the Question in the O.M.R. Answer Sheet. For example, in the question paper if "C" is correct answer for Question No.8, then darken against Sl. No.8 of O.M.R. Answer Sheet using Blue/Black Ball Point Pen as follows:

Question No. 8. A B C D (Only example) (Use Ball Pen only)

5. Rough work should be done only on the blank space provided in the Question Booklet. Rough work should not be done on the O.M.R. Answer Sheet.
6. If more than one circle is darkened for a given question, such answer is treated as wrong and no mark will be given. See the example in the O.M.R. Sheet.
7. The candidate and the Room Supervisor should sign in the O.M.R. Sheet at the specified place.
8. Candidate should return the original O.M.R. Answer Sheet and the university copy to the Room Supervisor after the examination.
9. Candidate can carry the question booklet and the candidate copy of the O.M.R. Sheet.
10. The calculator, pager and mobile phone are not allowed inside the examination hall.
11. **If a candidate is found committing malpractice, such a candidate shall not be considered for admission to the course and action against such candidate will be taken as per rules.**

INSTRUCTIONS TO FILL UP THE O.M.R. SHEET

1. There is only one most appropriate/correct answer for each question.
2. For each question, only one circle must be darkened with BLUE or BLACK ball point pen only. Do not try to alter it.
3. Circle should be darkened completely so that the alphabet inside it is not visible.
4. Do not make any stray marks on O.M.R. Sheet.

ಗಮನಿಸಿ : ಸೂಚನೆಗಳ ಕನ್ನಡ ಆವೃತ್ತಿಯು ಈ ಪುಸ್ತಕದ ಹಿಂಭಾಗದಲ್ಲಿ ಮುದ್ರಿಸಲ್ಪಟ್ಟಿದೆ.

SEAL

- 1) For an object moving in uniform circular motion with constant speed, the direction of instantaneous acceleration vector is
- (A) tangent to the path of motion (B) equal to zero
 (C) directed radially outward (D) directed radially inward
- 2) A plumb line dropped from the roof of a carriage moving with an acceleration a^* is inclined at an angle θ to the vertical. Then
- (A) $a^* = g \tan \theta$ (B) $a^* = g \sin \theta$
 (C) $a^* = g \cos \theta$ (D) $a^* = g / \tan \theta$
- 3) Earth rotates on its own axis with an angular speed ω radians per second. The magnitude of the Coriolis force on m (kg) moving from north to south with a speed of v (m/s) at latitude of 30° N is
- (A) $F_{\text{cor}} = 2m\omega v \cos 30^\circ$ (B) $F_{\text{cor}} = 2m\omega v \sin 120^\circ$
 (C) $F_{\text{cor}} = \sqrt{3}m\omega v + \cos 60^\circ$ (D) $F_{\text{cor}} = \sqrt{3}m\omega v \sin 60^\circ$
- 4) A particle of mass " m_0 " moves with speed $0.8c$, where c is the speed of light in vacuum. The relativistic kinetic energy of the particle is
- (A) $1.66 m_0 c^2$ (B) $m_0 c^2$
 (C) $0.8 m_0 c^2$ (D) $0.6 m_0 c^2$
- 5) The probability of occupation of a single state at energy E for indistinguishable particles of half integral spin is then

(A) $F(E) = \frac{1}{\text{EXP} \left[-\frac{E_F}{kT} + \frac{E}{kT} \right] - 1}$ (B) $F(E) = \frac{1}{\text{EXP} \left[-\frac{E_F}{kT} + \frac{E}{kT} \right]}$

(C) $F(E) = \frac{1}{\text{EXP} \left[-\frac{E_F}{kT} + \frac{E}{kT} \right] + 1}$ (D) $F(E) = \frac{1}{\text{EXP} \left[-\frac{E_F}{kT} - \frac{E}{kT} \right] - 1}$

- 6) Four equations are given below for V_e^2 , the square of the magnitude of escape velocity for an object on the surface of the earth, in terms of the mass of the earth M , the magnitude of acceleration due to gravity g on the surface and G , the universal gravitation constant. Identify the correct equation.

(A) $V_e^2 = 2\sqrt{\frac{GM}{g}}$

(B) $V_e^2 = 2\sqrt{gGM}$

(C) $V_e^2 = 2\sqrt{\frac{Gg}{M}}$

(D) $V_e^2 = \sqrt{\frac{GM}{g}}$

- 7) If m_1 and m_2 are the masses of two particles, then their reduced mass m is given by the formula

(A) $m = \frac{m_1 + m_2}{m_1 m_2}$

(B) $m = \frac{m_1}{m_2}$

(C) $\frac{1}{m} = \frac{1}{m_1} + \frac{1}{m_2}$

(D) $m = \frac{m_2}{m_1}$

- 8) A particle is moving in a central force field. Which one of the following option is not true?

(A) The orbital angular momentum about the centre of force is constant

(B) The areal velocity about the centre of force is constant

(C) The motion of the particle is planar

(D) The kinetic energy of the particle is always constant

- 9) A solid ball A moving with velocity \vec{u}_A makes an oblique elastic collision with another identical ball B at rest in the laboratory. If \vec{v}_A , \vec{v}_B are the velocities after collision of A and B respectively in the laboratory frame, choose the correct relation always satisfied by them?

(A) $\vec{v}_A \cdot \vec{v}_B = 0$

(B) $\vec{u}_A = \vec{v}_A - \vec{v}_B$

(C) $\vec{v}_A \cdot \vec{u}_A = \vec{v}_B \cdot \vec{u}_A$

(D) $\vec{u}_A = \vec{v}_B - \vec{v}_A$

- 10) A free neutron (n) decays in to a proton (p), an electron (e^-) and an electron anti-neutrino ($\bar{\nu}_e$). This decay is due to
- (A) Strong interaction (B) Electromagnetic interaction
(C) Weak interaction (D) Gravitational interaction
- 11) A circular thin disc of mass 5 kg has a radius 0.2 m. The moment of inertia about an axis passing through the edge and perpendicular to the plane of the disc (in kgm^2) is
- (A) 0.01 (B) 0.03
(C) 0.02 (D) 0.3
- 12) A round disc with a moment of inertia I_2 about its axis perpendicular to its plane and passing through its centre is placed over another disc with moment of inertia I_1 rotating with an angular velocity ' ω ' about the same axis. The magnitude of the final angular velocity of the combination of discs is
- (A) $\frac{I_2\omega}{I_1+I_2}$ (B) ω
(C) $\frac{I_1\omega}{I_1+I_2}$ (D) $\frac{(I_1+I_2)\omega}{I_1}$
- 13) The excess pressure inside a spherical soap bubble of radius 2 cm is balance by a column of oil (Sp. gravity 0.6) 3 mm high. The surface tension of oil is
- (A) 0.1764 N/m (B) 0.01764 N/m
(C) 0.0001764 N/m (D) 0.001764 N/m
- 14) The angular displacement of a bar in a torsion pendulum is $\theta(t)=3 \cos 5t$, where t is in seconds. What is the magnitude of the rate of change of θ , when $\theta = 1.5$ radians?
- (A) 13 s^{-1} (B) 3 s^{-1}
(C) 7.5 s^{-1} (D) 15 s^{-1}

- 15) The relation between young's modulus, bulk modulus and poisson's ratio is
(A) $q = 3k(1 - 2\sigma)$ (B) $q = 3k(1 - \sigma)$
(C) $q = 3k(1 + 2\sigma)$ (D) $q = 3k(1 + \sigma)$
- 16) A Carnot engine operates between 327 and 57 °C. What is its efficiency?
(A) 45% (B) 37%
(C) 74% (D) 79%
- 17) Five molecules have speeds of 12, 16, 32, 40 and 48 m/s. The root mean square speed of these molecules is
(A) 29.6 m/s (B) 32.6 m/s
(C) 5.92 m/s (D) 63 m/s
- 18) Rayleigh –Jean's law is an approximation of Plank's law at
(A) longer frequency region (B) shorter frequency region
(C) intermediate frequency region (D) all frequencies
- 19) A hot liquid is kept in a big room. The logarithm of the numerical value of temperature difference between the liquid and that of the room is plotted against time. The plot will be nearly
(A) a parabola (B) a straight line
(C) an ellipse (D) a circular arc
- 20) A slab having a thickness of 6 cm and measuring 25cm on a side has 40 °C temperature difference between its faces. How much heat flows through it per hour? The conductivity k is 0.0025 cal/s.cm.°C
(A) 1500 cal (B) 10.4 cal
(C) 56.25 cal (D) 37.5 cal
- 21) Laplace's correction in the formula for the speed of sound given by Newton was needed because sound waves
(A) are longitudinal
(B) propagate isothermal
(C) propagate adiabatically
(D) have long wavelengths

- 22) If ϵ is the electrical permittivity, μ is the magnetic permeability, then the refractive index of the material is approximately equal to
- (A) $\sqrt{\epsilon}$ (B) $\sqrt{\mu}$
(C) $\sqrt{\epsilon\mu}$ (D) $\sqrt{\epsilon/\mu}$
- 23) In a Michelson interferometer 200 fringes cross the field of view when the movable mirror is moved through 0.0589 mm. Calculate the wavelength of light used.
- (A) 4590 Å (B) 2945 Å
(C) 589 Å (D) 5890 Å
- 24) In convex lens the image is formed due to refraction of light. Similarly, in a zone plate the image is formed due to
- (A) interference (B) polarization
(C) diffraction (D) reflection
- 25) When a plane polarized monochromatic electromagnetic wave is incident on a plane interface at the Brewster angle, the reflected wave is
- (A) partially polarized
(B) unpolarized
(C) completely polarized parallel to the interface
(D) completely polarized perpendicular to the interface
- 26) A coil of wire of 1000 turns of area $5 \times 10^{-3} \text{ m}^2$ is rotated with a uniform speed of 300 rpm in a space of uniform magnetic flux density of 1T, the axis of rotation being perpendicular to the field. What is the maximum value of emf developed?
- (A) 210 V (B) 157 V
(C) 150 V (D) 225 V

27) An LCR series circuit is said to be inductive if,

(A) $\omega L > \frac{1}{\omega C}$

(B) $\omega L = \frac{1}{\omega C}$

(C) $\omega L < \frac{1}{\omega C}$

(D) $\omega L = \omega C$

28) An alternating sinusoidal emf of 100 V (rms) at 50 Hz is applied to a circuit containing an inductor of 80 mH and a resistor of 20 Ω in series. What is the current in the circuit?

(A) 1.23 A

(B) 2.51 A

(C) 3.11 A

(D) 5.34 A

29) A 60 Hz ac circuit has a resistance of 200 Ω and inductance of 10 mH, the power factor is

(A) 2

(B) -1

(C) -2

(D) 1

30) In a first order high pass filter, frequencies higher than low cut-off frequencies are called

(A) stop band frequency

(B) pass band frequency

(C) centre band frequency

(D) band stop frequency

31) De Broglie wavelength of an electron moving with a speed $v = 0.8c$ will be

(A) $0.303 \times 10^{-13} \text{m}$

(B) $0.303 \times 10^{-11} \text{m}$

(C) $0.303 \times 10^{-9} \text{m}$

(D) $0.303 \times 10^{-6} \text{m}$

32) If the accelerating potential of charged particles is increased fourfold, then the frequency of the matter waves associated with them increases by a factor of

(A) 4

(B) 2

(C) 0.5

(D) 16

- 33) In normal Zeeman effect, a state with $l = 3$ splits into sub states
(A) 3 (B) 4
(C) 7 (D) 10
- 34) Zero point energy of a harmonic oscillator is
(A) $\frac{h\omega}{4\pi}$ (B) $\frac{h\omega^2}{4\pi}$
(C) $\frac{h\omega}{2\pi}$ (D) $\frac{2h\omega}{\pi}$
- 35) Two level laser system is not possible because
(A) absorption does not take place
(B) population inversion is not possible
(C) stimulated emission does not take place
(D) spontaneous emission does not take place
- 36) The binding energy of lithium nucleus is 39.22MeV and the binding energy of helium nucleus is 27.22MeV. So,
(A) helium is more stable than lithium
(B) lithium is more stable than helium
(C) cannot say which is more stable
(D) both are equally stable
- 37) Liquid drop model of a nucleus can explain
(A) nuclear fusion.
(B) nuclear fission
(C) spin and magnetic moment of nuclei.
(D) quadrupole moment of nuclei.
- 38) A doubly magic nucleus is called so because,
(A) it shows twice the stability of a magic nucleus
(B) its mass number is a magic number
(C) both its proton number and neutron number are magic numbers
(D) its proton number, neutron number and mass number are all magic numbers

- 39) A G.M counter is
- (A) a non-energy-selective detector (B) an energy-selective detector
(C) a good photon detector (D) a good neutron detector

- 40) A semiconductor detector is a superior charge particle detector, because
- (A) possesses a depletion layer under forward bias
(B) possesses a depletion layer under reverse bias
(C) does not possess a depletion layer
(D) depletion layer shrinks under reverse bias

- 41) Expression for Wiedemann-Franz law
- (A) $\sigma_T/\sigma = LT$ (B) $\sigma/\sigma_T = LT$
(C) $\sigma_T/\sigma = L/T$ (D) $\sigma_T/\sigma = T/L$

- 42) Einstein's theory concludes that at lower temperature, the specific heat
- (A) drops linearly with increase in temperature
(B) drops exponentially with decrease in temperature
(C) drops linearly with decrease in temperature
(D) remains constant

- 43) The transition temperature of most superconducting elements lie in the range
- (A) 20 K to 50 K (B) 50 K to 70 K
(C) 0 to 10 K (D) above 70 K

- 44) In superconducting state
- (A) entropy increases and thermal conductivity decreases
(B) entropy decreases and thermal conductivity increases.
(C) entropy and thermal conductivity increase
(D) entropy and thermal conductivity decrease

- 45) For an elemental solid dielectric, the total polarization is given by
- (A) $N\alpha E/[1 - \gamma N\alpha/\epsilon_0]$ (B) $N^2\alpha E/[1 - \gamma N\alpha/\epsilon_0]$
 (C) $N^2E/[1 - \gamma N\alpha/\epsilon_0]$ (D) $N\alpha E^2/[1 - \gamma N\alpha/\epsilon_0]$
- 46) A bridge rectifier circuit is superior to a full wave rectifier circuit as
- (A) it does not require a C.T. transformer
 (B) the ripple is more
 (C) the ripple is less
 (D) it does not require a transformer
- 47) Zener diode always
- (A) operates under forward bias (B) operates under reverse bias
 (C) filters the ripple efficiency (D) rectifies the input ac
- 48) In a CE mode operation, the
- (A) base-emitter junction is reverse-biased
 (B) collector-emitter junction is reverse-biased
 (C) base-collector junction is forward biased
 (D) collector-emitter junction is forward biased
- 49) An emitter follower has unit
- (A) voltage gain (B) power gain
 (C) current gain (D) low input impedance
- 50) The output of a sequential logic circuit depends
- (A) purely on present state of the input
 (B) on previous state of output
 (C) on present state of input and the previous state of output
 (D) on the previous state of input and the present state of output



ROUGH WORK

ಅಭ್ಯರ್ಥಿಗಳಿಗೆ ಸೂಚನೆಗಳು

1. ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯ ಜೊತೆಗೆ 50 ಪ್ರಶ್ನೆಗಳನ್ನು ಹೊಂದಿರುವ ಮೊಹರು ಮಾಡಿದ ಪ್ರಶ್ನೆ ಪುಸ್ತಕವನ್ನು ನಿಮಗೆ ನೀಡಲಾಗಿದೆ.
2. ಕೊಟ್ಟಿರುವ ಪ್ರಶ್ನೆ ಪುಸ್ತಕವು, ನೀವು ಪರೀಕ್ಷೆಗೆ ಆಯ್ಕೆ ಮಾಡಿಕೊಂಡಿರುವ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದ್ದೇ ಎಂಬುದನ್ನು ಪರಿಶೀಲಿಸಿರಿ.
3. ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯ ಮೊಹರು ಜಾಗ್ರತೆಯಿಂದ ತೆರೆಯಿರಿ ಮತ್ತು ಪ್ರಶ್ನೆಪತ್ರಿಕೆಯಿಂದ ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯನ್ನು ಹೊರಗೆ ತೆಗೆದು, ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯಲ್ಲಿ ಸಾಮಾನ್ಯ ಮಾಹಿತಿಯನ್ನು ತುಂಬಿರಿ. ಕೊಟ್ಟಿರುವ ಸೂಚನೆಯಂತೆ ನೀವು ನಮೂನೆಯಲ್ಲಿನ ವಿವರಗಳನ್ನು ತುಂಬಲು ವಿಫಲರಾದರೆ, ನಿಮ್ಮ ಉತ್ತರ ಹಾಳೆಯ ಮೌಲ್ಯಮಾಪನ ಸಮಯದಲ್ಲಿ ಉಂಟಾಗುವ ಪರಿಣಾಮಗಳಿಗೆ ವೈಯಕ್ತಿಕವಾಗಿ ನೀವೇ ಜವಾಬ್ದಾರಾಗಿರುತ್ತೀರಿ.
4. ಪರೀಕ್ಷೆಯ ಸಮಯದಲ್ಲಿ:
 - a) ಪ್ರತಿಯೊಂದು ಪ್ರಶ್ನೆಯನ್ನು ಜಾಗ್ರತೆಯಿಂದ ಓದಿರಿ.
 - b) ಪ್ರತಿ ಪ್ರಶ್ನೆಯ ಕೆಳಗೆ ನೀಡಿರುವ ನಾಲ್ಕು ಲಭ್ಯ ಆಯ್ಕೆಗಳಲ್ಲಿ ಅತ್ಯಂತ ಸರಿಯಾದ/ ಸೂಕ್ತವಾದ ಉತ್ತರವನ್ನು ನಿರ್ಧರಿಸಿ.
 - c) ಓ.ಎಂ.ಆರ್. ಹಾಳೆಯಲ್ಲಿನ ಸಂಬಂಧಿಸಿದ ಪ್ರಶ್ನೆಯ ವೃತ್ತಾಕಾರವನ್ನು ಸಂಪೂರ್ಣವಾಗಿ ತುಂಬಿರಿ. ಉದಾಹರಣೆಗೆ, ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯಲ್ಲಿ ಪ್ರಶ್ನೆ ಸಂಖ್ಯೆ 8ಕ್ಕೆ "C" ಸರಿಯಾದ ಉತ್ತರವಾಗಿದ್ದರೆ, ನೀಲಿ/ಕಪ್ಪು ಬಾಲ್ ಪಾಯಿಂಟ್ ಪೆನ್ ಬಳಸಿ ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯ ಕ್ರಮ ಸಂಖ್ಯೆ 8ರ ಮುಂದೆ ಈ ಕೆಳಗಿನಂತೆ ತುಂಬಿರಿ:
 ಪ್ರಶ್ನೆ ಸಂಖ್ಯೆ 8.(A) (B) ● (D) (ಉದಾಹರಣೆ ಮಾತ್ರ) (ಬಾಲ್ ಪಾಯಿಂಟ್ ಪೆನ್ ಮಾತ್ರ ಉಪಯೋಗಿಸಿ)
5. ಉತ್ತರದ ಪೂರ್ವಸಿದ್ಧತೆಯ ಬರವಣಿಗೆಯನ್ನು (ಚಿತ್ತು ಕೆಲಸ) ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯಲ್ಲಿ ಒದಗಿಸಿದ ಖಾಲಿ ಜಾಗದಲ್ಲಿ ಮಾತ್ರವೇ ಮಾಡಬೇಕು (ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯಲ್ಲಿ ಮಾಡಬಾರದು).
6. ಒಂದು ನಿರ್ದಿಷ್ಟ ಪ್ರಶ್ನೆಗೆ ಒಂದಕ್ಕಿಂತ ಹೆಚ್ಚು ವೃತ್ತಾಕಾರವನ್ನು ಗುರುತಿಸಲಾಗಿದ್ದರೆ, ಅಂತಹ ಉತ್ತರವನ್ನು ತಪ್ಪು ಎಂದು ಪರಿಗಣಿಸಲಾಗುತ್ತದೆ ಮತ್ತು ಯಾವುದೇ ಅಂಕವನ್ನು ನೀಡಲಾಗುವುದಿಲ್ಲ. ಓ.ಎಂ.ಆರ್. ಹಾಳೆಯಲ್ಲಿನ ಉದಾಹರಣೆ ನೋಡಿ.
7. ಅಭ್ಯರ್ಥಿ ಮತ್ತು ಕೊಠಡಿ ಮೇಲ್ವಿಚಾರಕರು ನಿರ್ದಿಷ್ಟಪಡಿಸಿದ ಸ್ಥಳದಲ್ಲಿ ಓ.ಎಂ.ಆರ್. ಹಾಳೆಯ ಮೇಲೆ ಸಹಿ ಮಾಡಬೇಕು.
8. ಅಭ್ಯರ್ಥಿಯು ಪರೀಕ್ಷೆಯ ನಂತರ ಕೊಠಡಿ ಮೇಲ್ವಿಚಾರಕರಿಗೆ ಮೂಲ ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆ ಮತ್ತು ವಿಶ್ವವಿದ್ಯಾನಿಲಯದ ಪ್ರತಿಯನ್ನು ಹಿಂದಿರುಗಿಸಬೇಕು.
9. ಅಭ್ಯರ್ಥಿಯು ಪ್ರಶ್ನೆ ಪುಸ್ತಕವನ್ನು ಮತ್ತು ಓ.ಎಂ.ಆರ್. ಅಭ್ಯರ್ಥಿಯ ಪ್ರತಿಯನ್ನು ತಮ್ಮ ಜೊತೆ ತೆಗೆದುಕೊಂಡು ಹೋಗಬಹುದು.
10. ಕ್ಯಾಲ್ಕುಲೇಟರ್, ಪೇಜರ್ ಮತ್ತು ಮೊಬೈಲ್ ಫೋನ್‌ಗಳನ್ನು ಪರೀಕ್ಷಾ ಕೊಠಡಿಯ ಒಳಗೆ ಅನುಮತಿಸಲಾಗುವುದಿಲ್ಲ.
11. ಅಭ್ಯರ್ಥಿಯು ದುಷ್ಕೃತ್ಯದಲ್ಲಿ ತೊಡಗಿರುವುದು ಕಂಡುಬಂದರೆ, ಅಂತಹ ಅಭ್ಯರ್ಥಿಯನ್ನು ಕೋರ್ಸ್‌ಗೆ ಪರಿಗಣಿಸಲಾಗುವುದಿಲ್ಲ ಮತ್ತು ನಿಯಮಗಳ ಪ್ರಕಾರ ಇಂತಹ ಅಭ್ಯರ್ಥಿಯ ವಿರುದ್ಧ ಕ್ರಮ ಕೈಗೊಳ್ಳಲಾಗುವುದು.
ಓ.ಎಂ.ಆರ್. ಹಾಳೆಯನ್ನು ತುಂಬಲು ಸೂಚನೆಗಳು
 1. ಪ್ರತಿಯೊಂದು ಪ್ರಶ್ನೆಗೆ ಒಂದೇ ಒಂದು ಅತ್ಯಂತ ಸೂಕ್ತವಾದ/ಸರಿಯಾದ ಉತ್ತರವಿರುತ್ತದೆ.
 2. ಪ್ರತಿ ಪ್ರಶ್ನೆಗೆ ಒಂದು ವೃತ್ತವನ್ನು ಮಾತ್ರ ನೀಲಿ ಅಥವಾ ಕಪ್ಪು ಬಾಲ್ ಪಾಯಿಂಟ್ ಪೆನ್‌ನಿಂದ ಮಾತ್ರ ತುಂಬತಕ್ಕದ್ದು. ಉತ್ತರವನ್ನು ಮಾರ್ಪಡಿಸಲು ಪ್ರಯತ್ನಿಸಬೇಡಿ.
 3. ವೃತ್ತದೊಳಗಿರುವ ಅಕ್ಷರವು ಕಾಣದಿರುವಂತೆ ವೃತ್ತವನ್ನು ಸಂಪೂರ್ಣವಾಗಿ ತುಂಬುವುದು.
 4. ಓ.ಎಂ.ಆರ್. ಹಾಳೆಯಲ್ಲಿ ಯಾವುದೇ ಅನಾವಶ್ಯಕ ಗುರುತುಗಳನ್ನು ಮಾಡಬೇಡಿ.

Note : English version of the instructions is printed on the front cover of this booklet.

SEAL

SEAL

UNIVERSITY OF MYSORE
Postgraduate Entrance Examination June-2018



QUESTION PAPER
BOOKLET SERIES

W

QUESTION PAPER
BOOKLET NO.

102173

Entrance Reg. No.

SUBJECT CODE : **36**

QUESTION BOOKLET

(Read carefully the instructions given in the Question Booklet)

COURSE : **M.Sc.**

SUBJECT : **PHYSICS**

MAXIMUM MARKS : 50

MAXIMUM TIME : 1.15 HOURS

(Including time for filling O.M.R. Answer sheet)

INSTRUCTIONS TO THE CANDIDATES

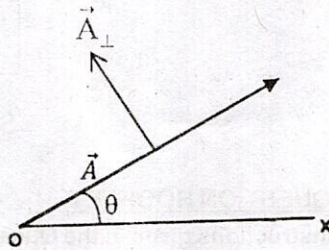
1. The sealed question paper booklet containing 50 questions enclosed with O.M.R. Answer Sheet is given to you.
2. Verify whether the given question booklet is of the same subject which you have opted for examination.
3. Open the question paper seal carefully and take out the enclosed O.M.R. Answer Sheet outside the question booklet and fill up the general information in the O.M.R. Answer sheet. If you fail to fill up the details in the form as instructed, you will be personally responsible for consequences arising during evaluating your Answer Sheet.
4. During the examination:
 - a) Read each question carefully.
 - b) Determine the Most appropriate/correct answer from the four available choices given under each question.
 - c) Completely darken the relevant circle against the Question in the O.M.R. Answer Sheet. For example, in the question paper if "C" is correct answer for Question No.8, then darken against Sl. No.8 of O.M.R. Answer Sheet using Blue/Black Ball Point Pen as follows:
Question No. 8. (A) (B) ● (D) (Only example) (Use Ball Pen only)
5. Rough work should be done only on the blank space provided in the Question Booklet. Rough work should not be done on the O.M.R. Answer Sheet.
6. If more than one circle is darkened for a given question, such answer is treated as wrong and no mark will be given. See the example in the O.M.R. Sheet.
7. The candidate and the Room Supervisor should sign in the O.M.R. Sheet at the specified place.
8. Candidate should return the original O.M.R. Answer Sheet and the university copy to the Room Supervisor after the examination.
9. Candidate can carry the question booklet and the candidate copy of the O.M.R. Sheet.
10. The calculator, pager and mobile phone are not allowed inside the examination hall.
11. If a candidate is found committing malpractice, such a candidate shall not be considered for admission to the course and action against such candidate will be taken as per rules.
12. Candidates have to get qualified in the respective entrance examination by securing a minimum of 8 marks in case of SC/ST/Cat-I Candidates and 10 marks in case of other Candidates out of 50 marks.

INSTRUCTIONS TO FILL UP THE O.M.R. SHEET

1. There is only one most appropriate/correct answer for each question.
2. For each question, only one circle must be darkened with BLUE or BLACK ball point pen only. Do not try to alter it.
3. Circle should be darkened completely so that the alphabet inside it is not visible.
4. Do not make any unnecessary marks on O.M.R. Sheet.
5. Mention the number of questions answered in the appropriate space provided in the O.M.R. sheet otherwise O.M.R. sheet will not be subjected for evaluation.

ಗಮನಿಸಿ : ಸೂಚನೆಗಳ ಕನ್ನಡ ಆವೃತ್ತಿಯು ಈ ಪುಸ್ತಕದ ಹಿಂಭಾಗದಲ್ಲಿ ಮುದ್ರಿಸಲ್ಪಟ್ಟಿದೆ.

- 1) If \vec{A} is vector of constant magnitude and \vec{A}_\perp is a vector of the same magnitude as \vec{A} but perpendicular to it as shown in fig. then



- (A) $\frac{d\vec{A}}{d\theta} = \vec{A}_\perp$ and $\frac{d\vec{A}_\perp}{d\theta} = -\vec{A}$ (B) $\frac{d\vec{A}}{d\theta} = -\vec{A}$ and $\frac{d\vec{A}_\perp}{d\theta} = \vec{A}_\perp$
- (C) $\frac{d\vec{A}}{d\theta} = -\vec{A}_\perp$ and $\frac{d\vec{A}_\perp}{d\theta} = \vec{A}$ (D) $\frac{d\vec{A}}{d\theta} = \vec{A}$ and $\frac{d\vec{A}_\perp}{d\theta} = -\vec{A}_\perp$

- 2) When a particle is in uniform circular motion
- (A) its velocity is radial and its acceleration is transverse
- (B) both velocity and acceleration are radial
- (C) both velocity and acceleration are transverse
- (D) velocity is transverse and acceleration is radial
- 3) Rest mass (m_0) of a particle moving with the speed of light is
- (A) Equal to Zero
- (B) Greater than zero
- (C) Less than zero
- (D) Infinite
- 4) In Fermi-Dirac distribution
- (A) Only electrons close to the Fermi energy can gain energy as the temperature increases
- (B) All electrons can gain energy as the temperature increases
- (C) Particles are identical but distinguishable
- (D) Particles have integral spin

- 5) If two spaceships A and B are moving in the same direction relative to someone on earth with speed $(2/5)c$ and $(12/13)c$ respectively, then the speed of spaceship A relative to spaceship B is
- (A) $(34/41)c$
 (B) $(24/31)c$
 (C) $(34/24)c$
 (D) $(31/24)c$
- 6) A 4 kg metal ball is moving with a speed of 6 m/s directly towards a 2 kg metal ball at rest. The two metal balls collide and stick together. Their velocity immediately after the collision is
- (A) 4 m/s
 (B) 3 m/s
 (C) 8 m/s
 (D) 6 m/s
- 7) A rocket whose initial mass M_i is 850 kg consumes fuel at the rate $R=2.3$ kg/s. The speed v_{rel} of the exhaust gases relative to the rocket engine is 2800 m/s. The thrust provided by the rocket engine is
- (A) 1217 N
 (B) 6440 N
 (C) 1955 N
 (D) 640 N
- 8) The escape velocity for Earth whose mass is 5.98×10^{24} kg, radius is 6.37×10^6 m and $G = 6.67 \times 10^{-11} \text{ Nm}^2/\text{kg}^2$ is
- (A) 11.2×10^4 m/s
 (B) 0.11×10^4 m/s
 (C) 112×10^4 m/s
 (D) 1.12×10^4 m/s
- 9) Which of the following is not correct according to Kepler's laws of motion?
- (A) The planet will move most slowly when it is farthest from the sun and most rapidly when it is nearest to the sun
 (B) The square of the period of any planet is proportional to the cube of the semi major axis of its orbit
 (C) The cube of the period of any planet is proportional to the square of the semi major axis of its orbit
 (D) All planets move in elliptical orbit, with sun at one focus

- 10) A vertical light spring is stretched by 2 cm when a load of 10 g is attached to its free end. The load is further pulled down by 1 cm and released. Compute its frequency.
- (A) 3.52 Hz
 - (B) 3 Hz
 - (C) 4.5 Hz
 - (D) 4.8 Hz
- 11) The number of degrees of freedom for a rigid body consisting of only two point masses is
- (A) 3
 - (B) 4
 - (C) 5
 - (D) 6
- 12) Which of the following is the reason for mercury not wetting glass?
- (A) Cohesive force between mercury molecules is stronger than the adhesive force between mercury and glass molecules
 - (B) Cohesive force between mercury molecules is weaker than the adhesive force between mercury and glass molecules
 - (C) Cohesive force between mercury molecules is equal to half the adhesive force between mercury and glass molecules
 - (D) Cohesive force between mercury molecules is zero
- 13) The moment of inertia of a thin uniform rod about an axis perpendicular to its length is
- (A) greatest when the axis passes through the centre of mass of the rod
 - (B) least when the axis passes through a point at one end of the rod
 - (C) least when the axis passes through a point midway between one end and the centre of mass of the rod
 - (D) least when the axis passes through the centre of mass of the rod
- 14) In the case of a single light uniform cantilever fixed at one end and loaded at the other, the radius of curvature of bending is
- (A) least at the fixed end
 - (B) least at the loaded end
 - (C) least at the centre of mass of the cantilever
 - (D) same at all points on the cantilever

- 15) If r is the radius of a spherical drop of a liquid of surface tension T , then the excess pressure across the surface of drop is
- (A) directly proportional to both T and r
 - (B) directly proportional to T but inversely proportional to r
 - (C) inversely proportional to T but directly proportional to r
 - (D) inversely proportional to both T and r
- 16) The molar mass M of Oxygen is 0.0320 kg/mol . The average speed of Oxygen gas molecules at $T = 300 \text{ K}$ is
- (A) 445 m/s
 - (B) 550 m/s
 - (C) 545 m/s
 - (D) 440 m/s
- 17) If the temperature of a black body increases from 7°C to 287°C , then rate of energy radiation increases by a factor
- (A) $(287/7)^4$
 - (B) 16
 - (C) 4
 - (D) 2
- 18) A body takes 4 minutes to cool from 100°C to 70°C . To cool from 70°C to 40°C , it will take (room temperature is 15°C)
- (A) 7 minutes
 - (B) 6 minutes
 - (C) 5 minutes
 - (D) 4 minutes
- 19) The combined form of the first and second laws of thermodynamics is
- (A) $TdS = dU + PdV$
 - (B) $dQ = TdS$
 - (C) $dU = TdS + dQ$
 - (D) $dQ = dU - TdS + dN$

- 20) If the equation for a state for gas with internal energy U is $PV = (1/3)U$, then the equation for an adiabatic process is
- (A) $PV^{1/3} = \text{Constant}$
 - (B) $PV^{2/3} = \text{Constant}$
 - (C) $PV^{4/3} = \text{Constant}$
 - (D) $PV^{3/5} = \text{Constant}$
- 21) Fresnel biprism device is used to obtain _____ sources.
- (A) Coherent
 - (B) Incoherent
 - (C) Both coherent and incoherent
 - (D) Partially coherent
- 22) The shape of the interference fringes from the Llyod's mirror is
- (A) Parabola
 - (B) Circular
 - (C) Hyperbolic
 - (D) Straight
- 23) In the case of Fraunhofer diffraction the distance between the source and the screen is
- (A) Finite
 - (B) Zero
 - (C) Infinite
 - (D) Twice that between the slit and the screen
- 24) When a polarizer is rotated, the intensity of the light varies, but never reduces to zero because the light is
- (A) Unpolarized
 - (B) Partially plane polarized
 - (C) Completely polarized
 - (D) Circularly polarized

- 25) In a Michelson's interferometer 200 fringes cross the field of view when the movable mirror is moved through 0.0589 mm. The wavelength of the light used is
- (A) 5890 Å
 - (B) 5890 nm
 - (C) 5890 μm
 - (D) 5890 pm
- 26) The current in the primary of a small transformer is changing at the rate of 600 A/s. The induced emf in the secondary is 18 V. The coefficient of mutual inductance is
- (A) 33.33 H
 - (B) 10.8 H
 - (C) 30 mH
 - (D) 270 mH
- 27) The quality factor of a series RLC resonance circuit is given by
- (A) $\frac{1}{R}\sqrt{C/L}$
 - (B) $\omega L/R$
 - (C) $\omega L/RC$
 - (D) RC/ω
- 28) The cut-off frequency of a 1st order RC low pass filter is
- (A) $\frac{1}{2\pi RC}$
 - (B) $\frac{1}{\pi\sqrt{RC}}$
 - (C) $\frac{1}{2\pi\sqrt{RC}}$
 - (D) $\frac{1}{4\pi RC}$
- 29) Decibel is defined in terms of the input and output powers P_1 and P_2 as
- (A) $10 \log(P_2/P_1)$
 - (B) $\ln(P_2/P_1)$
 - (C) $10 \log(P_1/P_2)$
 - (D) $\ln(P_1/P_2)$

- 30) The inductance of the coil is proportional to
- Average length of the coil
 - Number of turns in the coil
 - Square of area of the coil
 - Square of number of turns in the coil
- 31) The expression for the fine structure constant in the Sommerfeld's relativistic atomic model is
- $\frac{e^2}{2\varepsilon_0 ch}$
 - $\frac{2e^2}{\pi\varepsilon_0 ch}$
 - $\frac{c^2}{2\varepsilon_0 e \hbar}$
 - 137
- 32) The general quantization rule for atomic orbitals is
- $\iiint p_q dq = n_q c$
 - $\oint p_q dq = n_q h$
 - $\oint \dot{p}_q dp = n_p h$
 - $\iint P_q d\dot{q} = n_q c$
- 33) The magnetic moment of the electron is
- $-9.285 \times 10^{-24} \text{JT}$
 - $-9.285 \times 10^{-24} \text{Cm}$
 - $-9.285 \times 10^{-24} \text{J/T}$
 - $-9.285 \times 10^{-24} \text{C/m}$
- 34) The atomic number of Cobalt is 27. Then the electronic configuration of the Cobalt is
- $1s^2 2s^2 2p^6 3s^2 3p^6 3d^9$
 - $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 4s^2 4p^1$
 - $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4p^6 3d^1$
 - $1s^2 2s^2 2p^6 3s^2 3p^6 3d^7 4s^2$

- 35) The reason why a two level laser is not realizable is
(A) Stimulated emission will not take place
(B) Population inversion is not achievable
(C) Laser will not be coherent
(D) Spontaneous emission will not take place
- 36) The radius of a spherical nucleus as measured by electron scattering is 3.6 fm. What is the likely mass number of the nucleus? (Given $R_0 = 1.2$ fm)
(A) 27
(B) 40
(C) 56
(D) 120
- 37) The nucleus which has radius one-third of the radius of ^{189}Os is
(A) ^9Be
(B) ^7Li
(C) ^{19}F
(D) ^{12}C
- 38) If N_0 is the original mass of the substance of half life period of 5 years, then the amount of substance left after 15 years is
(A) $N_0/2$
(B) $N_0/3$
(C) $N_0/4$
(D) $N_0/8$
- 39) A uranium nucleus $^{238}_{92}\text{U}$ emits an α -particle and an electron in succession. The atomic number and mass number of the final nucleus respectively are
(A) 90 and 233
(B) 90 and 238
(C) 91 and 234
(D) 93 and 238
- 40) A G.M. Counter is a
(A) non-energy selective detector
(B) energy selective detector
(C) semiconductor detector
(D) scintillation detector

- 41) The drift velocity of the free electrons with mobility of $3.5 \times 10^{-3} \text{ m}^2/\text{Vs}$ in copper for electric field strength of 0.5 V/m is
- (A) 3.5 m/s
 - (B) $1.75 \times 10^3 \text{ m/s}$
 - (C) 11.5 m/s
 - (D) $1.75 \times 10^{-3} \text{ m/s}$
- 42) The unit of Hall coefficient is
- (A) $\text{A}^2 \text{ Wb V}^{-1} \text{ m}^{-3}$
 - (B) $\text{V m}^3 \text{ A}^{-1} \text{ Wb}^{-3}$
 - (C) $\text{V Wb m}^{-2} \text{ A}^{-2}$
 - (D) A Wb^{-2}
- 43) The polarization produced in a dielectric medium of relative permittivity 6 in the presence of an electric field of 600 V/mm is
- (A) $2.66 \times 10^{-5} \text{ C/m}^2$
 - (B) $3.66 \times 10^{-5} \text{ C/m}^2$
 - (C) $4.66 \times 10^{-5} \text{ C/m}^2$
 - (D) $5.66 \times 10^{-5} \text{ C/m}^2$
- 44) The 5 g of copper was heated from 20°C to 80°C . How much energy was used to heat copper? Given: Specific heat capacity of Cu is $0.092 \text{ cal g}^{-1} \text{ }^\circ\text{C}^{-1}$
- (A) 37.6 cal
 - (B) 27.6 cal
 - (C) 47.6 cal
 - (D) 49.6 cal
- 45) With increase in temperature, the electrical conductivity of an intrinsic semiconductor
- (A) decreases
 - (B) increases
 - (C) remains same
 - (D) first increases then decreases
- 46) In a CE mode operation, the
- (A) base-emitter junction is reverse-biased
 - (B) collector-emitter junction is reverse-biased
 - (C) base-collector junction is forward biased
 - (D) collector-emitter junction is forward biased

- 47) The output of a sequential logic circuit depends on
- (A) purely present state of the input
 - (B) previous state of output
 - (C) present state of input and the previous state of output
 - (D) the previous state of input and the present state of output
- 48) The operating frequency of a Hartley oscillator is given by
- (A) $\frac{1}{2\pi\sqrt{C(L_1 + L_2 + 2M)}}$
 - (B) $\frac{1}{2\pi\sqrt{RC}}$
 - (C) $\frac{1}{4\pi\sqrt{RC}}$
 - (D) $\frac{1}{4\pi\sqrt{LC}}$
- 49) A transistor with $\alpha = 0.99$ is operated in a common emitter circuit. What is the current gain β ?
- (A) 1
 - (B) 100
 - (C) 99
 - (D) 0.99
- 50) An amplifier has a voltage gain of 132 and a current gain of 200. The output power of the amplifier if the input power is $60 \mu\text{W}$ is
- (A) 0.54 W
 - (B) 1.2 W
 - (C) 1.584 W
 - (D) 2.5 W



ಅಭ್ಯರ್ಥಿಗಳಿಗೆ ಸೂಚನೆಗಳು

1. ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯ ಜೊತೆಗೆ 50 ಪ್ರಶ್ನೆಗಳನ್ನು ಹೊಂದಿರುವ ಮೊಹರು ಮಾಡಿದ ಪ್ರಶ್ನೆ ಪುಸ್ತಕವನ್ನು ನಿಮಗೆ ನೀಡಲಾಗಿದೆ.
2. ಕೊಟ್ಟಿರುವ ಪ್ರಶ್ನೆ ಪುಸ್ತಕವು, ನೀವು ಪರೀಕ್ಷೆಗೆ ಆಯ್ಕೆ ಮಾಡಿಕೊಂಡಿರುವ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದ್ದೇ ಎಂಬುದನ್ನು ಪರಿಶೀಲಿಸಿರಿ.
3. ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯ ಮೊಹರನ್ನು ಜಾಗ್ರತೆಯಿಂದ ತೆರೆಯಿರಿ ಮತ್ತು ಪ್ರಶ್ನೆಪತ್ರಿಕೆಯಿಂದ ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯನ್ನು ಹೊರಗೆ ತೆಗೆದು, ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯಲ್ಲಿ ಸಾಮಾನ್ಯ ಮಾಹಿತಿಯನ್ನು ತುಂಬಿರಿ. ಕೊಟ್ಟಿರುವ ಸೂಚನೆಯಂತೆ ನೀವು ನಮೂನೆಯಲ್ಲಿನ ವಿವರಗಳನ್ನು ತುಂಬಲು ವಿಫಲರಾದರೆ, ನಿಮ್ಮ ಉತ್ತರ ಹಾಳೆಯ ಮೌಲ್ಯಮಾಪನ ಸಮಯದಲ್ಲಿ ಉಂಟಾಗುವ ಪರಿಣಾಮಗಳಿಗೆ ವೈಯಕ್ತಿಕವಾಗಿ ನೀವೇ ಜವಾಬ್ದಾರಾಗಿರುತ್ತೀರಿ.
4. ಪರೀಕ್ಷೆಯ ಸಮಯದಲ್ಲಿ:
 - a) ಪ್ರತಿಯೊಂದು ಪ್ರಶ್ನೆಯನ್ನು ಜಾಗ್ರತೆಯಿಂದ ಓದಿರಿ.
 - b) ಪ್ರತಿ ಪ್ರಶ್ನೆಯ ಕೆಳಗೆ ನೀಡಿರುವ ನಾಲ್ಕು ಲಭ್ಯ ಆಯ್ಕೆಗಳಲ್ಲಿ ಅತ್ಯಂತ ಸರಿಯಾದ/ ಸೂಕ್ತವಾದ ಉತ್ತರವನ್ನು ನಿರ್ಧರಿಸಿ.
 - c) ಓ.ಎಂ.ಆರ್. ಹಾಳೆಯಲ್ಲಿನ ಸಂಬಂಧಿಸಿದ ಪ್ರಶ್ನೆಯ ವೃತ್ತಾಕಾರವನ್ನು ಸಂಪೂರ್ಣವಾಗಿ ತುಂಬಿರಿ. ಉದಾಹರಣೆಗೆ, ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯಲ್ಲಿ ಪ್ರಶ್ನೆ ಸಂಖ್ಯೆ 8ಕ್ಕೆ "C" ಸರಿಯಾದ ಉತ್ತರವಾಗಿದ್ದರೆ, ನೀಲಿ/ಕಪ್ಪು ಬಾಲ್ ಪಾಯಿಂಟ್ ಪೆನ್ ಬಳಸಿ ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯ ಕ್ರಮ ಸಂಖ್ಯೆ 8ರ ಮುಂದೆ ಈ ಕೆಳಗಿನಂತೆ ತುಂಬಿರಿ:
ಪ್ರಶ್ನೆ ಸಂಖ್ಯೆ 8. (A) (B) (C) (D) (ಉದಾಹರಣೆ ಮಾತ್ರ) (ಬಾಲ್ ಪಾಯಿಂಟ್ ಪೆನ್ ಮಾತ್ರ ಉಪಯೋಗಿಸಿ)
5. ಉತ್ತರದ ಪೂರ್ವಸಿದ್ಧತೆಯ ಬರವಣಿಗೆಯನ್ನು (ಚಿತ್ತು ಕೆಲಸ) ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯಲ್ಲಿ ಒದಗಿಸಿದ ಖಾಲಿ ಜಾಗದಲ್ಲಿ ಮಾತ್ರವೇ ಮಾಡಬೇಕು (ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯಲ್ಲಿ ಮಾಡಬಾರದು).
6. ಒಂದು ನಿರ್ದಿಷ್ಟ ಪ್ರಶ್ನೆಗೆ ಒಂದಕ್ಕಿಂತ ಹೆಚ್ಚು ವೃತ್ತಾಕಾರವನ್ನು ಗುರುತಿಸಲಾಗಿದ್ದರೆ, ಅಂತಹ ಉತ್ತರವನ್ನು ತಪ್ಪು ಎಂದು ಪರಿಗಣಿಸಲಾಗುತ್ತದೆ ಮತ್ತು ಯಾವುದೇ ಅಂಕವನ್ನು ನೀಡಲಾಗುವುದಿಲ್ಲ. ಓ.ಎಂ.ಆರ್. ಹಾಳೆಯಲ್ಲಿನ ಉದಾಹರಣೆ ನೋಡಿ.
7. ಅಭ್ಯರ್ಥಿ ಮತ್ತು ಕೊಠಡಿ ಮೇಲ್ವಿಚಾರಕರು ನಿರ್ದಿಷ್ಟಪಡಿಸಿದ ಸ್ಥಳದಲ್ಲಿ ಓ.ಎಂ.ಆರ್. ಹಾಳೆಯ ಮೇಲೆ ಸಹಿ ಮಾಡಬೇಕು.
8. ಅಭ್ಯರ್ಥಿಯು ಪರೀಕ್ಷೆಯ ನಂತರ ಕೊಠಡಿ ಮೇಲ್ವಿಚಾರಕರಿಗೆ ಮೂಲ ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆ ಮತ್ತು ವಿಶ್ಲವಿದ್ಯಾನಿಲಯದ ಪ್ರತಿಯನ್ನು ಹಿಂದಿರುಗಿಸಬೇಕು.
9. ಅಭ್ಯರ್ಥಿಯು ಪ್ರಶ್ನೆ ಪುಸ್ತಕವನ್ನು ಮತ್ತು ಓ.ಎಂ.ಆರ್. ಅಭ್ಯರ್ಥಿಯ ಪ್ರತಿಯನ್ನು ತಮ್ಮ ಜೊತೆ ತೆಗೆದುಕೊಂಡು ಹೋಗಬಹುದು.
10. ಕ್ಯಾಲ್ಕುಲೇಟರ್, ಪೇಜರ್ ಮತ್ತು ಮೊಬೈಲ್ ಫೋನ್‌ಗಳನ್ನು ಪರೀಕ್ಷಾ ಕೊಠಡಿಯ ಒಳಗೆ ಅನುಮತಿಸಲಾಗುವುದಿಲ್ಲ.
11. ಅಭ್ಯರ್ಥಿಯು ದುಷ್ಕೃತ್ಯದಲ್ಲಿ ತೊಡಗಿರುವುದು ಕಂಡುಬಂದರೆ, ಅಂತಹ ಅಭ್ಯರ್ಥಿಯನ್ನು ಕೋರ್ಸ್‌ಗೆ ಪರಿಗಣಿಸಲಾಗುವುದಿಲ್ಲ ಮತ್ತು ನಿಯಮಗಳ ಪ್ರಕಾರ ಅಂತಹ ಅಭ್ಯರ್ಥಿಯ ವಿರುದ್ಧ ಕ್ರಮ ಕೈಗೊಳ್ಳಲಾಗುವುದು.
12. ಈ ಪ್ರವೇಶ ಪರೀಕ್ಷೆಯಲ್ಲಿ ಅರ್ಹರಾಗಲು ಒಟ್ಟು 50 ಅಂಕಗಳಲ್ಲಿ SC/ST/Cat-I ಅಭ್ಯರ್ಥಿಗಳು ಕನಿಷ್ಠ 8 ಅಂಕಗಳನ್ನು ಮತ್ತು ಇನ್ನಿತರ ಅಭ್ಯರ್ಥಿಗಳು ಕನಿಷ್ಠ 10 ಅಂಕಗಳನ್ನು ಪಡೆಯತಕ್ಕದ್ದು.

ಓ.ಎಂ.ಆರ್. ಹಾಳೆಯನ್ನು ತುಂಬಲು ಸೂಚನೆಗಳು

1. ಪ್ರತಿಯೊಂದು ಪ್ರಶ್ನೆಗೆ ಒಂದೇ ಒಂದು ಅತ್ಯಂತ ಸೂಕ್ತವಾದ/ಸರಿಯಾದ ಉತ್ತರವಿರುತ್ತದೆ.
2. ಪ್ರತಿ ಪ್ರಶ್ನೆಗೆ ಒಂದು ವೃತ್ತವನ್ನು ಮಾತ್ರ ನೀಲಿ ಅಥವಾ ಕಪ್ಪು ಬಾಲ್ ಪಾಯಿಂಟ್ ಪೆನ್‌ನಿಂದ ಮಾತ್ರ ತುಂಬತಕ್ಕದ್ದು. ಉತ್ತರವನ್ನು ಮಾರ್ಪಡಿಸಲು ಪ್ರಯತ್ನಿಸಬೇಡಿ.
3. ವೃತ್ತದೊಳಗಿರುವ ಅಕ್ಷರವು ಕಾಣದಿರುವಂತೆ ವೃತ್ತವನ್ನು ಸಂಪೂರ್ಣವಾಗಿ ತುಂಬುವುದು.
4. ಓ.ಎಂ.ಆರ್. ಹಾಳೆಯಲ್ಲಿ ಯಾವುದೇ ಅನಾವಶ್ಯಕ ಗುರುತುಗಳನ್ನು ಮಾಡಬೇಡಿ.
5. ಉತ್ತರಿಸಿದ ಪ್ರಶ್ನೆಗಳ ಒಟ್ಟು ಸಂಖ್ಯೆಯನ್ನು O.M.R. ಹಾಳೆಯಲ್ಲಿ ನಿಗದಿಪಡಿಸಿರುವ ಜಾಗದಲ್ಲಿ ನಮೂದಿಸತಕ್ಕದ್ದು, ಇಲ್ಲವಾದಲ್ಲಿ O.M.R. ಹಾಳೆಯನ್ನು ಮೌಲ್ಯಮಾಪನಕ್ಕೆ ಪರಿಗಣಿಸುವುದಿಲ್ಲ.

Note : English version of the instructions is printed on the front cover of this booklet.

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