### ( PART-I : Core Subject )

- In a common base connection the emitter current is 1 mA. If the emitter circuit is open, the collector current is 50 μA. The total collector current is (given α = 0.92)
  - [A] 0.92
  - [B] 0.97
  - [C] 0.87
  - [D] 0.50
- 2. Inputs given to a logic gate are A and B and its output is X. If A = 1, B = 0, then X = 1. What type of gate this could be?
  - · [A] AND gate or NOR gate
  - [B] OR gate or NAND gate
  - [C] NOT gate or NOR gate
  - [D] AND gate only
- 3. Input resistance of an ideal Op-Amp is
  - [A] ∞

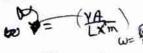
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- [B] 0
- [C] 1
- [D] None of the above
- **4.** The value of Lande g-factor for s-state
  - [A] 0
- [B] 1
- /[C] 2
- [D] ½
- If A and B are Einstein's coefficients, then
- $A_{12} = B_{12}$
- (B)  $B_{12} = B_{21}$
- $\{\hat{C}\}$   $A_{12} = 0$
- $[D] A_{12} = A_{21}$



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- If the nuclear radius of <sup>27</sup>Al is 3·6 fm, the approximate nuclear radius of <sup>64</sup>Cu in fm is
  - [A] 4·8
  - [B] 3.6
  - [C] 2·4
  - [D] 1·2
- 7. A decay chain of the nucleus U-238 involves eight α-decays and six β-decays. The final nucleus at the end of the process will be
- P[A] Z = 82, A = 206
- O(B) Z = 84, A = 224
- [C] Z = 88, A = 206
- $\rho$  [D] Z = 76, A = 200
- 8. Parity is always conserved in
  - [A] α-decay
  - [B] β-decay
  - [C] γ-decay
  - [D] All of the above
- 9. A space station moving in a circular orbit around the earth goes into a new bound orbit by fixing its engine radially outwards. This orbit is
  - [A] larger circle
  - [B] smaller circle
  - [C] an ellipse
  - [D] a parabola
- 10. Two bodies of masses m and 2m are connected by spring constant, the frequency of normal mode is
  - [A]  $\sqrt{(3k/2m)}$
  - \* [B] √(k/m)
  - [C] √(2k/3m)
  - [D]  $\sqrt{(k/3m)}$





- An electron (rest mass m<sub>0</sub>) gains energy so that its mass becomes 2m<sub>0</sub>. Its speed is
  - [A] (\3/2)c
- m= mo
- |B| (3/4)c

[D] v(3/2)c

- [C] (3/2)c
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- The Lagrangian of a particle of mass m moving in a plane is given by

$$L = \frac{1}{2} [m(v_x^2 + v_y^2)] + a(xv_y - yv_x)$$

where  $v_x$  and  $v_y$  are velocity components and a is constant. The canonical momenta of the particle are given by

- [A]  $p_x = mv_x$  and  $p_y = mv_y$
- $|B| \quad p_x = m v_x + ay \text{ and } p_y = m v_y + ax$
- |C|  $p_x = mv_x ay$  and  $p_y = mv_y + ax$
- [D]  $p_x = mv_x ay$  and  $p_y = mv_y ax$
- 13. Assuming the mean life of a muon as 2 x 10<sup>-6</sup> sec, its lifetime in the laboratory frame, when it is moving with a velocity 0-95C is
  - |A| 6.4 × 10-6 sec
  - [B] 0.62 × 10-6 sec
  - [C] 2·16 × 10<sup>-6</sup> sec
  - [D] 0·19 × 10<sup>-6</sup> sec
- 14. A particle with an initial velocity  $v_0 \hat{i}$  enters a region with an electric field  $E_0 \hat{j}$  and a magnetic field  $B_0 \hat{j}$ . The trajectory of the particle will
  - [A] be an ellipse
  - [B] be a cycloid
  - [C] be a helix with constant pitch
  - [D] not be confined to any plane

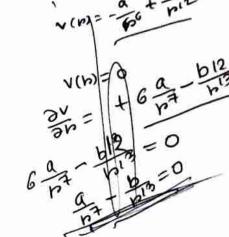
- **15.** If  $L_y$ ,  $L_y$  and  $L_z$  are respectively x, y and z components of angular momentum operator L, the commutator  $[L_y, L_y, L_z]$  is equal to
  - [A]  $i\hbar |L_x^2 + L_y^2|$ 
    - [B] 2ihL,
  - $[C] = i h | L_x^2 L_y^2$
  - [D] zero
- 16. The potential of a diatomic molecule as a function of the distance r between the atoms is given by  $V(r) = -\frac{a}{r^6} + \frac{b}{r^{12}}$ . The value of the potential at equilibrium separation between the atoms is

$$\bullet [A] - \frac{4a^2}{b}$$





$$\rho [D] -\frac{a^2}{4b}$$



 If the Lagrangian of a particle moving in one dimension is given by

$$L = \frac{\dot{x}^2}{2x} - V(x)$$
, the Hamiltonian is

$$[A] \quad \frac{1}{2} \underbrace{x \, p^2 + V(x)}_{}$$

• [B] 
$$\frac{\dot{x}^2}{2x} + V(x)$$

$$\wedge$$
 [C]  $\frac{1}{2}\dot{x}^2 + V(x)$ 

$$\int_{[D]} \frac{p^2}{2x} + V(x)$$

- 18. What is proper time interval between the occurrence of two events if in one inertial frame, events are separated by 7.5 × 10<sup>8</sup> m and occur 6.5 s apart?
  - [A] 6.50 s

- [B] 6.00 s
- [C] 5.75 s
- [D] 5.00 s
- 19. A particle of mass m is in a cubic box of size a. The potential inside the box  $(0 \le x \le a, \ 0 \le y \le a, \ 0 \le z \le a)$  is zero and infinite outside. If the particle is in an eigenstate of energy  $E = \frac{14\pi^2\hbar^2}{2ma^2}$ , its wavefunction is

[A] 
$$\Psi = \left(\frac{2}{a}\right)^{\frac{3}{2}} \sin \frac{3\pi x}{a} \sin \frac{5\pi y}{a} \sin \frac{6\pi z}{a} \quad \Psi = \sqrt{\frac{2}{a}} \sin \frac{\pi x}{a}$$

[B] 
$$\Psi = \left(\frac{2}{a}\right)^{\frac{3}{2}} \sin \frac{7\pi x}{a} \sin \frac{4\pi y}{a} \sin \frac{3\pi z}{a}$$

[C] 
$$\Psi = \left(\frac{2}{a}\right)^{\frac{3}{2}} \sin \frac{4\pi x}{a} \sin \frac{8\pi y}{a} \sin \frac{2\pi z}{a}$$

[D] 
$$\Psi = \left(\frac{2}{a}\right)^{\frac{3}{2}} \sin \frac{\pi x}{a} \sin \frac{2\pi y}{a} \sin \frac{3\pi z}{a}$$

- **20.** The energy eigenvalues of a particle in the potential  $V(x) = \frac{1}{2}m\omega^2x^2 ax$  are
  - $[A] \quad E_n = \left(n + \frac{1}{2}\right)\hbar \omega \frac{a^2}{2m\omega^2}$

  - [C]  $E_n = \left(n + \frac{1}{2}\right)\hbar \omega \frac{\alpha^2}{m\omega^2}$
  - [D]  $E_n = \left(n + \frac{1}{2}\right) \hbar \omega$

- 21. Let (V, A) and (V', A') denote two sets of scalar and vector potentials, and ψ is a scalar function. Which of the following transformations leaves the electric and magnetic fields (and hence Maxwell's equations) unchanged?
  - [A]  $\vec{A}' = \vec{A} + \nabla \Psi$  and  $V' = V \frac{\partial \Psi}{\partial t}$
  - [B]  $\vec{A}' = \vec{A} \nabla \Psi$  and  $V' = V + 2 \frac{\partial \Psi}{\partial t}$
  - [C]  $\vec{A}' = \vec{A} + \nabla \Psi$  and  $V' = V + \frac{\partial \Psi}{\partial t}$
  - [D]  $\vec{A'} = \vec{A} \nabla \Psi$  and  $V' = V \frac{\partial \Psi}{\partial t}$
- 22. The energy of the first excited quantum state of a particle in the two-dimensional potential

$$V(x,y) = \frac{1}{2}m\omega^2(x^2 + 4y^2)$$
 is

- [A] 2hω
- [B] 3ħω
- $[C] \frac{3}{2}\hbar\omega$
- $[D] \frac{5}{2}\hbar\omega$
- given by  $\psi = \left(\frac{1}{\sqrt{2}}\varphi_0 + i\varphi_1\right)$ , where  $\varphi_0$  and  $\varphi_1$  are the normalized eigenfunctions with energies  $E_0$  and  $E_1$  corresponding to the ground state and first excited state respectively. The expectation value of the Hamiltonian in the state is

[A] 
$$\psi = \frac{E_0}{2} + E_1$$

- [B]  $\psi = \frac{E_0}{2} E_1$ 
  - [C]  $\psi = \frac{E_0 2E_1}{3}$ 
    - [D]  $\psi = \frac{E_0 + 2E_1}{3}$



24. Consider a system whose three energy levels are given by 0 ε and 2ε. The energy level ε is two-fold degenerate and the other two are non-degenerate. The partition function of the system

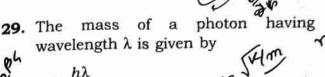
with  $\beta = \frac{1}{k_B T}$  is given by

- [A]  $1 + 2e^{-\beta x}$
- [B]  $2e^{-\beta\epsilon} + e^{-2\beta\epsilon}$
- [C]  $(1+2e^{-\beta t})^2$
- [D]  $1 + e^{-\beta \epsilon} + 2e^{-\beta \epsilon}$
- 25. A rotating spherical shell of uniform surface charge and mass density has total mass M and charge Q. If its angular momentum is L and magnetic moment is μ, then the ratio μ/L is
  - [A] Q/3M
  - [B] 2Q/3M
  - [C] Q/2M
  - [D] 3Q/4M
- **26.** The force between two long and parallel wires carrying currents  $I_1$  and  $I_2$  and separated by a distance D is proportional to
  - [A]  $(I_1 + I_2)/D$
  - [B]  $(I_1 I_2)/D$
  - [C]  $((I_1 I_2)/D)^2$
  - [D]  $(I_1 I_2)/D^2$
- 27. A proton is accelerated to a high energy E and shot at a nucleus of Oxygen (¹6O). In order to penetrate the Coulomb barrier and reach the surface of the Oxygen nucleus, E must be at least
  - [A] 3.6 MeV
  - [B] 1.8 MeV
  - [C] 45 keV
  - [D] 180 eV

**28.** A particle of mass 1 kg is undergoing small oscillation about the equilibrium point in the potential  $V(x) = \frac{1}{2x^{12}} - \frac{1}{x^6} \text{ for } x > 0 \text{ meters. The time period of the oscillation is}$ 

[A] 1·1 sec

- 2 [B] 1.08 sec
  - [C] 2·01 sec
  - [D] 0.8 sec



- $[A] \frac{h\lambda}{c}$
- [B] 0
- $\Gamma$  [C]  $\frac{hc}{\lambda}$
- ullet [D]  $rac{h}{c\lambda}$  রেনেসাঁ of Aliah
- 30. In a first order phase transition, at the transition temperature, specific heat of the system
  - [A] diverges and its entropy remains the same
  - [B] diverges and its entropy has finite discontinuity
  - [C] remains unchanged and its entropy has finite discontinuity
  - [D] has finite discontinuity and its entropy diverges
- 31. A system of N non-interacting and distinguishable particle of spin 1 is in thermodynamic equilibrium. The entropy of the system is
  - $[A] 2k_B \ln N$
  - [B]  $3k_B \ln N$
  - [C] Nk<sub>B</sub> ln 2
  - $^{\sim}$  [D]  $Nk_{_{B}} \ln 3$

- 32. For an ideal Fermi gas in threedimensions, the electron velocity  $V_F$ at the Fermi surface is related to electron concentration n as NO DE
  - [A]  $V_F \propto n^{2/3}$
  - [B]  $V_{\scriptscriptstyle F} \propto n$
  - [C]  $V_F \propto n^{1/3}$
  - [D]  $V_F \propto n^{1/2}$
- The activity of a radioactive sample is decreased to 75% of the initial value after 30 days. The half-life (in days) of the sample is approximately [You may use  $\ln 3 \approx 1 \cdot 1$ ,  $\ln 4 \approx 1 \cdot 4$ 
  - [A] 38
  - [B] 45
  - [C] 59
  - [D] 69
- 34. Which one of the following sets corresponds to fundamental particles?
  - [A] Proton, electron and neutron
  - [B] Proton, electron and photon
  - [C] Electron, photon and neutrino
  - [D] Quark, electron and meson
- 35. A combination of two thin convex lenses of equal focal lengths is kept separated along the optic axes by a distance of 20 cm between them. The combination behaves as a lens system of infinite focal length. If an object is kept at 10 cm from the first lens, its image will be formed on the other side at a distance x from the second lens. The value of x is
  - [A] 10 cm
  - [B] 20 cm
  - [C] 6.67 cm
  - [D] infinite

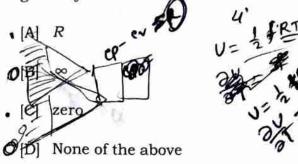
36. White light is incident on a grating G with groove density 600 lines/mn and width 50 mm. A small portion of the diffracted light is incident on another grating  $G_2$  with groove density 1800 lines/mm and width 15 mm The resolving power of the combined system is

[A]  $3 \times 10^3$ 

- [C]  $81 \times 10^7$
- [D]  $108 \times 10^5$
- 37. Doppler effect can be used to measure the speed of blood through vessels. Sound of frequency 1.0522 MHz is sent through the vessels along the direction of blood flow. The reflected sound generates a beat signal of frequency 100 Hz. The speed of sound in blood is 1545 m/sec. The speed of blood through the vessel (in m/sec) is
  - [A] 14.68
  - [B] 1·468
  - [C] 0·1468
  - [D] 0·01468
- 38. Light traveling between two points takes a path for which
  - [A] time of flight is always minimum
  - B distance is always minimum
  - [C] time of flight is extremum
  - [D] distance is extremum

- 39. A lightly damped harmonic oscillator with natural frequency  $\omega_0$  is driven by a periodic force of frequency  $\omega$ . The amplitude of oscillation is maximum when
  - [A]  $\omega$  is slightly lower than  $\omega_0$
  - [B]  $\omega = \omega_0$
  - [C]  $\omega$  is slightly higher than  $\omega_0$
  - [D] the force is in phase with the displacement
- 40. The work function of a substance is 4.0 eV. The longest wavelength of light that can cause photoelectron emission from this substance is approximately
  - [A] 540 nm
  - [B] 400 nm
  - [C] 310 nm
  - [D] 220 nm
- 41. In the ascending order of values for an ideal gas at a given temperature, the mean, r.m.s. and most probable speed are
  - [A] mean > r.m.s. > most probable speed
  - ' [B] r.m.s. > mean > most probable speed
    - [C] most probable speed > mean > r.m.s.
    - [D] None of the above
- **42.** In the equation of polytropic process  $pV^n = \text{constant}$ , for an ideal gas, the process is adiabatic when
  - [A] n = 0
  - [B] n = 1
  - [C] n = ∞
  - [D]  $n = \gamma$
- 8

43. The value of  $C_p - C_v$  for water at 4 °C is given by



- 44. A reversible engine converts 1/6th of the heat input into work. If the temperature of the sink is reduced by 62 °C, its efficiency is doubled, the values of the temperature of the source and sink are
  - [A] 37 °C and 99 °C
  - [B] 47 °C and 87 °C
  - [C] 47 °C and 73 °C
  - [D] 37 °C and 87 °C
- **45.** Specific heat of two-dimensional solid varies with temperature as
  - $\sim [A] \propto T^2$

- [B] ∝ T<sup>3</sup>
- $\bullet$ [C]  $\propto T$



- •[D] ∝1/T
- **46.** Which one of the following is a fermion?
  - [A] Photon
  - •[B] α-particle
  - · [C] 4Be7 nucleus
  - [D] Deuteron



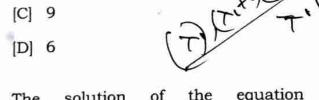
47. There are three cells in a phase space : 1, 2 and 3 and N=30 particles:  $N_1 = N_2 = N_3 = 10$ . If  $E_1 = 2$  joules,  $E_2 = 4$ joules,  $E_3 = 6$  joules and  $\delta N_3 = -2$ , the value of  $\delta N_2$  is (Given that :  $\delta N = 0$  and  $\delta U = 0$ 



- · [B] 4
- রেনেসাঁ of Aliah · [C] -2
- .[D] -4
- A 3 × 3 matrix has eigenvalues 0, 2 + i and 2-i. Which of the following statements is correct?
  - [A] The matrix is Hermitian
  - [B] The matrix is unitary
  - [C] The inverse of the matrix exists
  - [D]  $\det A = 0$
- 49. A 3 × 3 matrix has elements such that its trace is 11 and its determinant is

12 [B]

36. The eigenvalues of the matrix are all known to be positive integers. The largest eigenvalue of the matrix is [A] 18



equation the solution of **50.** The  $\frac{\partial u}{\partial x} = 2 \frac{\partial u}{\partial t} + u$  is (where  $u(x,0) = 6e^{-3x}$ )

[A] 
$$u = 6e^{-3x+2}$$

[B] 
$$u = 6e^{-3x-3t}$$

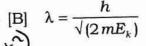
[C] 
$$u = 6e^{-3x-2t}$$

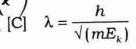
[D] 
$$u = 6e^{-2x+3}$$

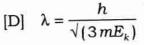
- **51.** If the frequency of a pendulum is four times greater on an unknown planet that it is on earth, then the acceleration due to gravity on that planet is
  - [A] 16 times greater
  - [B] 4 times greater
  - [C] 16 times lesser
  - [D] 24 times lesser
- 52. What is the minimum speed required for an airplane for moving in a vertical loop of radius 1 km if the pilot has to stay intact to his seat at the top of the loop?
  - [A] Mass of the pilot is required to calculate this
  - [B] 980 m/sec
  - [C] 49 m/sec
  - [D] 100 m/sec
- 53. The de Broglie wavelength of a particle having K.E. =  $E_k$  is given by

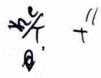
[A] 
$$\lambda = \frac{h}{\sqrt{(E_k)}}$$

JO.









- 54. At room temperature, the speed of sound in air is 340 m/sec. An organ pipe with both ends open has a length L = 29 cm. An extra hole is created at the position L/2. The lowest frequency of sound produced is
  - [A] 293 Hz
  - [B] 586 Hz
  - [C] 1172 Hz
  - [D] 2344 Hz

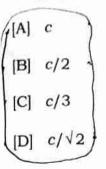


- The total energy operator can be written as
  - $[A] = -i\hbar \frac{\partial}{\partial t}$
  - [B]  $ih \frac{\partial}{\partial t}$
- রেনেসাঁত feAlialmere
- [C]  $-\hbar \frac{\partial}{\partial t}$
- [D]  $\hbar \frac{\partial}{\partial t}$
- 56. A loop of wire is placed in a magnetic field of 0.5 T, such that magnetic field B is perpendicular to plane of the loop. If loop begins to shrink at a constant rate of 0.6 m²/s, magnitude of e.m.f. induced is
  - [A] 0.4 V
  - [B] 3 V
  - [C] 0.3 V
  - [D] zero
- **57.** For wave function  $\psi(x) = \sqrt{\frac{2}{L}} \sin \frac{\pi x}{L}$ , 0 < x < L, the expectation value of  $< p^2 >$  is
  - $[A] \quad \frac{\pi^2 \hbar^2}{L^2}$
  - [B]  $\frac{\pi^2 \hbar}{L^2}$
  - [C]  $\frac{\pi \hbar^2}{L^2}$
  - $\bullet [D] = \frac{\pi^2 \hbar^2}{L} \cdot \mathbf{7}$



- 58. Which of the following is correct?
  - [A]  $[x^2, p^2] = 2i\hbar px, [x^2, p] = -2i\hbar px$
  - [B]  $[x^2, p^2] = 4i\hbar, [x^2, p] = 2i\hbar x$
  - [C]  $[x^2, p^2] = 2i \hbar [px + xp],$  $[x^2, p] = 2i \hbar x$
  - [D]  $[x^2, p^2] = 2i\hbar[px + xp],$  $[x^2, p] = -2i\hbar x.$

59. The speed of an electron, whose de Broglie wavelength is equal to its Compton wavelength, is (c is the speed of light)



- **60.** If there exists a body with total charge 1.3e, it will violate the principle of
  - [A] conservation of charge
  - [B] conservation of energy
  - [C] superposition
  - , [D] quantization of charge
- 61. Electric field lines are always
  - [A] tangential to an equipotential surface
  - [B] normal to an equipotential surface
  - [C] closed lines
  - [D] None of the above
- **62.** Mechanical pressure on the surface of a charged conductor having surface charge density  $\sigma$  is
  - [A]  $\varepsilon_0 \sigma^2$
  - [B]  $\frac{\sigma^2}{2\epsilon_0}$
  - [C]  $\frac{\sigma^2}{\epsilon_0}$
  - [D]  $\frac{\sigma}{2\epsilon_0}$

- 63. Dipolar field varies with distance as
  - $[A] = \frac{1}{r}$

- [B]  $\frac{1}{r^3}$
- [C]  $\frac{1}{r^2}$
- [D] None of the above
- **64.** If the separation between two charges is increased, then the electric potential energy
  - · [A] always decreases
  - · [B] may increase or decrease
  - . [C] always increases
  - · [D] remains the same
- 65. A moving charge produces
  - · [A] electric field only -
  - ' [B] magnetic field only
  - . [C] both electric and magnetic fields =
  - [D] None of the above
- 66. Which one of the following is not a characteristic of magnetostatic field?
  - [A] It is solenoidal
  - [B] It is conservative
  - [C] Flux lines are always closed
  - [D] Net magnetic flux through a closed surface is always zero
- 67. An intrinsic semiconductor behaves as an insulator at
  - [A] very high temperature
  - [B] very low temperature
  - [C] moderate temperature
  - [D] None of the above

- 68. Time constant of a CR circuit is
  - [A] 1/CR
  - [B] R/C
  - [C] CR
  - [D] C/R
- 69. A capacitor acts as an open circuit for
  - [A] AC
  - [B] DC
  - [C] both AC and DC
  - [D] None of the above
- 70. Atomic packing factor for Body Centred Cubic (BCC) lattice is
  - ·[A] 52%
  - · [B] 68%
    - [C] 66%
  - •[D] 74%
- Bee in a wood and a war
- 71. If n is the number of atoms in the unit cell of the cubic system,  $N_A$  and  $M_A$  are the Avogadro's number and atomic weight respectively and  $\rho$  is the density of the element, then the lattice constant a is given by

 $\left[\frac{M_A \rho}{n N_A}\right]$ 

 $\left[\frac{nN_A}{M_A\rho}\right]^{\frac{1}{3}}$ 

• [C]  $\left[\frac{nM_A}{N_A\rho}\right]^{\frac{1}{2}}$ 

[D]  $\left[\frac{\rho N_A}{M_A n}\right]^{\frac{1}{2}}$ 

(3) 2 2×3 (2) 2×3 (2) 43

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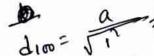
- **72.** In a simple cubic lattice  $d_{100}: d_{110}: d_{111}$ is
  - · [A] 6:3:2



- [B] 6:3:√2
- , [C] \( \sqrt{6} : \sqrt{3} : \sqrt{2}
- IDI √6:√3:√4



- 73. A plane intercepts at a,  $\frac{b}{2}$  and 3c in a simple cubic unit cell. The Miller indices of the plane are
  - [A] (132)
  - . [B] (261)



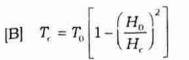
- [C] (361)
- [D] (123)
- 74. Two identical organ pipes producing fundamental notes frequencies 200 Hz at 15 °C. If the temperature of one pipe is raised to 27 °C, the number of beats produced will be
  - [A] 2
  - [B] 4
  - [C] 6
  - [D] 8



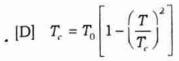


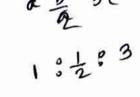
- 75. In Young's double slit experiment, if the separation of the slits is increased by two times, the fringe spacing
  - [A] remains same
  - [B] decreases by half
  - [C] increases by two times
  - [D] increases by four times

- Transition temperature T<sub>e</sub> and critical field H for a superconductor are related as
  - [A]  $H_c = H_0(T_c 1)$

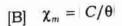


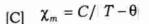
[C]  $H_c = H_0(T_c + 1)$ 





- 77. Curie-Weiss law is
  - [A]  $\chi_m = C/T$







- [D]  $\chi_m = |T \theta| / C$
- 78. Bipolar Junction Transistor (BJT) is a
  - [A] current control device
  - HB| voltage control device
  - →C| Both [A] and [B]
  - →D None of the above
- 79. Output resistance of a common base transistor connection is
  - MAl low
  - √B high
  - (C) very high
  - VD zero
- 80. In an npn transistor, the leakage current consists
  - · [A] electrons moving from the base to the emitter
  - [B] electrons moving from collector to the base
  - [C] electrons moving from the collector to the emitter
  - . [D] electrons moving from the base to the collector

#### PART-II

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

81.	On	which	day	did	Holy	Prophet	
	(PBUH) die?						

- [A] Saturday
- [B] Friday
- ্রা Monday রেনেসাঁ of Aliah
- . [D] Tuesday

#### 82. The capital of Iraq is

- [A] Najaf
- [B] Kufa
- [C] Tehran
- [D] Baghdad

# The first structure of the Holy Kabaa was built by

- ' [A] Hadrat Moosa (AS)
- ·[B] Hadrat Ibrahim (AS)
- /[C] Hadrat Adam (AS)
- [D] Hadrat Yahya (AS)

#### 84. How many times does the Haji run between Safa and Marwah?

- '[A] 10
- · [B] 12
- · [C] 7
- . [D] 15

#### 85. The authentic Hadees is known as

- (A) Masand
- (B) Sahifah
- (C) Sahih
- (D) None of the above

# 86. The total number of Prophets (AS) is

- [A] 124000
- [B] 128000
- [C] 125000
- [D] 120000

### 87. Who was Prophet Muhammad's (PBUH) father?

- · [A] Abdullah
- [B] Abdul Muttalib
- · [C] Abu Talib
- · [D] Hamza

#### 88. Hazr-e-Aswad means

- (A) pious stone
- (B) black stone
- (C) foundation stone
- (D) None of the above

### 89. The capital of Umayyad dynasty was

- [A] Baghdad
- [B] Cairo
- [C] Khurasan
- [D] Damascus

#### 90. Ansar means

- [A] defender
- [B] helper
- [C] ruler
- [D] None of the above

91.	Fra	nkenstein is	1 06	i pil	Fill in the blank with an appropriate article/preposition :	
	[A]	A film by Alfred Hitchcock	90	ar		
		A novel by Mary Shelley		100000	overnment must establish niversity in the region.	
		A detective story by Conan Doyle		[A]	a	
				[B]		
	D	A short story by O. Henry			the None of the above	
92.	Ha the	rshabardhan' and 'Gobardhan' — se two characters are created by	97	. Se	Select the correct active form of the given sentence:	
	[A]	Narayan Debnath		He	was given a shirt for his birthday by r.	
	[B]	Narayan Gangopadhyaya			She has gave him a shirt for his birthday  She give a shirt to him for his	
	[C]	Shibram Chakraborty		[B]		
	[D]	Shaila Chakraborty		[C]	birthday She gave him a shirt for his	
93.		to is the first Indian to hit a triple atury in Test Cricket?		.10.1 -151	birthday  She will be giving him a shirt for his birthday	
	[A]	Virender Sehwag	98	. Fill	in the blank with an appropriate	
	[B]	VVS Laxman		adv	verb:	
	[C]	Sachin Tendulkar			e tea is hot, I cannot drink it. it cool down a bit.	
	[D]	Sunil Gavaskar			hardly	
		রেনেসাঁ of Aliah			scarcely hard	
94.	The	largest steel plant in India is in		2 22	too	
	[A]	Jamshedpur	99		in the blank with an appropriate	
	[B]	Bokaro	55.	adv	rerb:	
	[C]	Durgapur			e essay is good.	
	[D]	Bhilai		40.50	more very	
	رحا			20.000	most	
95.	Whi	ich territories of India were first		A	much	
liberated from the British rule and renamed as 'Sahid' and 'Swaraj'?		100.	Fill	in the blank with an appropriate		
		22 AV = 1		adje	ective :	
	[A]	Kohima			house is as yours.	
	[B]	Delhi			big as big	
	[C]	Andaman and Nicobar Islands		12.6	bigger	
	[D]	Nagaland	Į	1.5	biggest	
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