(PART—I : Core Subject)

1. 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 $\alpha = 0{\cdot}92$)

[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] ∞

[B] 0

[C] 1

[D] None of the above

4. The value of Lande g-factor for s-state is

[A] 0

[B] 1

[C] 2

[D] ½

5. If A and B are Einstein's coefficients, then

[A] $A_{12} = B_{12}$

[B] $B_{12} = B_{21}$

[C] $A_{12} = 0$

[D] $A_{12} = A_{21}$

6. If the nuclear radius of ^{27}Al is 3·6 fm, the approximate nuclear radius of ^{64}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

[A] $Z = 82$, $A = 206$

[B] $Z = 84$, $A = 224$

[C] $Z = 88$, $A = 206$

[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] $\sqrt{(k/m)}$

[C] $\sqrt{(2k/3m)}$

[D] $\sqrt{(k/3m)}$

11. An electron (rest mass m_0) gains energy so that its mass becomes $2m_0$. Its speed is

[A] $(\sqrt{3}/2)c$

[B] $(3/4)c$

[C] $(3/2)c$

[D] $\sqrt{(3/2)}c$

12. 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] $p_x = mv_x + ay$ and $p_y = mv_y + ax$

[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 2×10^{-6} sec, its lifetime in the laboratory frame, when it is moving with a velocity 0·95C is

[A] $6{\cdot}4 \times 10^{-6}$ sec

[B] $0{\cdot}62 \times 10^{-6}$ sec

[C] $2{\cdot}16 \times 10^{-6}$ sec

[D] $0{\cdot}19 \times 10^{-6}$ 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_x, L_y and L_z are respectively x, y and z components of angular momentum operator L, the commutator $[L_x, L_y, L_z]$ is equal to

[A] $ih\,L_z^2 + L_y^2$

[B] $2ih\,L_z$

[C] $ih\,L_x^2 - L_y^2$

[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

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

[B] $-\frac{2a^2}{b}$

[C] $-\frac{a^2}{2b}$

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

17. 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] $\frac{1}{2}x p^2 + V(x)$

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

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

[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 $7{\cdot}5 \times 10^8$ 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 $E = \dfrac{14\pi^2\hbar^2}{2ma^2}$, its wavefunction is

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

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

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

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

20. The energy eigenvalues of a particle in the potential $V(x) = \dfrac{1}{2}m\omega^2x^2 - ax$ are

[A] $E_n = \left(n+\dfrac{1}{2}\right)\hbar\omega - \dfrac{a^2}{2m\omega^2}$

[B] $E_n = \left(n+\dfrac{1}{2}\right)\hbar\omega + \dfrac{a^2}{2m\omega^2}$

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

[D] $E_n = \left(n+\dfrac{1}{2}\right)\hbar\omega$

21. Let $(V, \vec{A})$ and $(V', \vec{A}')$ 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 $V' = V - \dfrac{\partial\psi}{\partial t}$

[B] $\vec{A}' = \vec{A} - \nabla\Psi$ and $V' = V + 2\dfrac{\partial\psi}{\partial t}$

[C] $\vec{A}' = \vec{A} + \nabla\Psi$ and $V' = V + \dfrac{\partial\psi}{\partial t}$

[D] $\vec{A}' = \vec{A} - \nabla\Psi$ and $V' = V - \dfrac{\partial\psi}{\partial t}$

22. The energy of the first excited quantum state of a particle in the two-dimensional potential $V(x,y) = \dfrac{1}{2}m\omega^2(x^2+4y^2)$ is

[A] $2\hbar\omega$

[B] $3\hbar\omega$

[C] $\dfrac{3}{2}\hbar\omega$

[D] $\dfrac{5}{2}\hbar\omega$

23. The wavefunction of a particle is given by $\psi = \left(\dfrac{1}{\sqrt{2}}\varphi_0 + i\varphi_1\right)$, where φ_0 and φ_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] $\psi = \dfrac{E_0}{2} + E_1$

[B] $\psi = \dfrac{E_0}{2} - E_1$

[C] $\psi = \dfrac{E_0 - 2E_1}{3}$

[D] $\psi = \dfrac{E_0 + 2E_1}{3}$

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] $1 + 2e^{-\beta\epsilon}$

[B] $2e^{-\beta\epsilon} + e^{-2\beta\epsilon}$

[C] $(1 + 2e^{-\beta\epsilon})^2$

[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 (^{16}O). 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 $V(x) = \frac{1}{2x^{12}} - \frac{1}{x^6}$ for $x > 0$ meters. The time period of the oscillation is

[A] 1·1 sec

[B] 1·08 sec

[C] 2·01 sec

[D] 0·8 sec

29. The mass of a photon having wavelength λ is given by

[A] $\frac{h\lambda}{c}$

[B] 0

[C] $\frac{hc}{\lambda}$

[D] $\frac{h}{c\lambda}$

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] $Nk_B \ln 2$

[D] $Nk_B \ln 3$

32. For an ideal Fermi gas in three-dimensions, the electron velocity V_F at the Fermi surface is related to electron concentration n as

[A] $V_F \propto n^{2/3}$

[B] $V_F \propto n$

[C] $V_F \propto n^{1/3}$

[D] $V_F \propto n^{1/2}$

33. 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_1 with groove density 600 lines/mm 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] 3×10^3

[B] 57×10^3

[C] 81×10^7

[D] 108×10^5

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 ω_0 is driven by a periodic force of frequency ω. The amplitude of oscillation is maximum when

[A] ω is slightly lower than ω_0

[B] $\omega = \omega_0$

[C] ω is slightly higher than ω_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 = constant, for an ideal gas, the process is adiabatic when

[A] $n = 0$

[B] $n = 1$

[C] $n = \infty$

[D] $n = \gamma$

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

[A] R

[B] ∞

[C] zero

[D] None of the above

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

[A] $\propto T^2$

[B] $\propto T^3$

[C] $\propto T$

[D] $\propto 1/T$

46. Which one of the following is a fermion?

[A] Photon

[B] α-particle

[C] $_4Be^7$ 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 δN_2 is (Given that : $\delta N = 0$ and $\delta U = 0$)

[A] 2

[B] 4

[C] −2

[D] −4

48. 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 36. The eigenvalues of the matrix are all known to be positive integers. The largest eigenvalue of the matrix is

[A] 18

[B] 12

[C] 9

[D] 6

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

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

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

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

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

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

[B] $\lambda = \frac{h}{\sqrt{(2mE_k)}}$

[C] $\lambda = \frac{h}{\sqrt{(mE_k)}}$

[D] $\lambda = \frac{h}{\sqrt{(3mE_k)}}$

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

55. The total energy operator can be written as

[A] $-i\hbar\frac{\partial}{\partial t}$

[B] $i\hbar\frac{\partial}{\partial t}$

[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 m^2/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] $\frac{\pi^2\hbar^2}{L^2}$

[B] $\frac{\pi^2\hbar}{L^2}$

[C] $\frac{\pi\hbar^2}{L^2}$

[D] $\frac{\pi^2\hbar^2}{L}$

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)

[A] c

[B] $c/2$

[C] $c/3$

[D] $c/\sqrt{2}$

60. If there exists a body with total charge $1{\cdot}3e$, 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 σ is

[A] $\varepsilon_0\sigma^2$

[B] $\frac{\sigma^2}{2\varepsilon_0}$

[C] $\frac{\sigma^2}{\varepsilon_0}$

[D] $\frac{\sigma}{2\varepsilon_0}$

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%

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 ρ is the density of the element, then the lattice constant a is given by

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

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

[C] $\left[\frac{nM_A}{N_A\rho}\right]^{\frac{1}{3}}$

[D] $\left[\frac{\rho N_A}{M_A n}\right]^{\frac{1}{3}}$

72. In a simple cubic lattice $d_{100} : d_{110} : d_{111}$ is

[A] 6 : 3 : 2

[B] $6 : 3 : \sqrt{2}$

[C] $\sqrt{6} : \sqrt{3} : \sqrt{2}$

[D] $\sqrt{6} : \sqrt{3} : \sqrt{4}$

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] (1 3 2)

[B] (2 6 1)

[C] (3 6 1)

[D] (1 2 3)

74. Two identical organ pipes are producing fundamental notes of 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

76. Transition temperature T_c and critical field H_c for a superconductor are related as

[A] $H_c = H_0(T_c - 1)$

[B] $T_c = T_0\left[1 - \left(\frac{H_0}{H_c}\right)^2\right]$

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

[D] $T_c = T_0\left[1 - \left(\frac{T}{T_c}\right)^2\right]$

77. Curie-Weiss law is

[A] $\chi_m = C/T$

[B] $\chi_m = C/\theta$

[C] $\chi_m = C/(T - \theta)$

[D] $\chi_m = (T - \theta)/C$

78. Bipolar Junction Transistor (BJT) is a

[A] current control device

[B] voltage control device

[C] Both [A] and [B]

[D] None of the above

79. Output resistance of a common base transistor connection is

[A] low

[B] high

[C] very high

[D] 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

[C] Monday

[D] Tuesday

রেনেসাঁ of Aliah

82. The capital of Iraq is

[A] Najaf

[B] Kufa

[C] Tehran

[D] Baghdad

83. 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. *Frankenstein* is

[A] A film by Alfred Hitchcock

[B] A novel by Mary Shelley

[C] A detective story by Conan Doyle

[D] A short story by O. Henry

92. 'Harshabardhan' and 'Gobardhan' — these two characters are created by

[A] Narayan Debnath

[B] Narayan Gangopadhyaya

[C] Shibram Chakraborty

[D] Shaila Chakraborty

93. Who is the first Indian to hit a triple century in Test Cricket?

[A] Virender Sehwag

[B] VVS Laxman

[C] Sachin Tendulkar

[D] Sunil Gavaskar

94. The largest steel plant in India is in

[A] Jamshedpur

[B] Bokaro

[C] Durgapur

[D] Bhilai

95. Which territories of India were first liberated from the British rule and renamed as 'Sahid' and 'Swaraj'?

[A] Kohima

[B] Delhi

[C] Andaman and Nicobar Islands

[D] Nagaland

96. Fill in the blank with an appropriate article/preposition :

Government must establish ____ University in the region.

[A] a

[B] an

[C] the

[D] None of the above

97. Select the correct active form of the given sentence :

He was given a shirt for his birthday by her.

[A] She has gave him a shirt for his birthday

[B] She give a shirt to him for his birthday

[C] She gave him a shirt for his birthday

[D] She will be giving him a shirt for his birthday

98. Fill in the blank with an appropriate adverb :

The tea is _____ hot, I cannot drink it. Let it cool down a bit.

[A] hardly

[B] scarcely

[C] hard

[D] too

99. Fill in the blank with an appropriate adverb :

The essay is _____ good.

[A] more

[B] very

[C] most

[D] much

100. Fill in the blank with an appropriate adjective :

My house is _____ as yours.

[A] big

[B] as big

[C] bigger

[D] biggest

[P.T.O.