

- Find $\lim_{x \rightarrow 0} \frac{\sin x - \tan x}{x^3}$
 (A) 0 (B) 1 (C) $-\frac{1}{2}$ (D) $\frac{1}{2}$
- For the series $\sum_{n=1}^{\infty} \frac{(-1)^{n-1}(3x-1)^n}{n^2}$, which of the following statements is not correct?
 (A) The series radius of convergence is $x = 1/3$.
 (B) The series converges absolutely at $0 \leq x \leq 2/3$.
 (C) The series converges conditionally at $0 \leq x \leq 2/3$.
 (D) The series converges at $0 \leq x \leq 2/3$.
- If $x_1, x_2, \dots, x_n$ are any real numbers and n is any positive integer, then which of the following inequality holds
 (A) $n \sum_{i=1}^n x_i^2 < (\sum_{i=1}^n x_i)^2$
 (B) $\sum_{i=1}^n x_i^2 \geq (\sum_{i=1}^n x_i)^2$
 (C) $\sum_{i=1}^n x_i^2 \geq n (\sum_{i=1}^n x_i)^2$
 (D) None of these
- Let $f(x, y) = \begin{cases} \frac{xy}{\sqrt{x^2+y^2}} & x^2 + y^2 \neq 0 \\ 0 & x = y = 0 \end{cases}$. Then which of the following is not correct?
 (A) $f(x, y)$ is not differentiable at the origin (B) $f(x, y)$ is continuous at the origin
 (C) $f_x(0,0) = f(0,0)$ (D) $f_y(0,0) = f(0,0)$
- $f(x, y) = \frac{x^3+y^3}{x^{99}+y^{98}x+y^{99}}$ find the value of f_y at $(x, y) = (0,1)$.
 (A) -96 (B) 101 (C) 210 (D) 0
- If $u = e^x \sin y$, where $x = st^2, y = s^2t$ then $\frac{\partial u}{\partial s}$ is
 (A) $t^2 e^x \cos y + 2ste^x \sin y$ (B) $t^2 e^x \sin y + s^2 te^x \cos y$
 (C) $te^x \sin y + ste^x \cos y$ (D) $t^2 e^x \sin y + 2ste^x \cos y$
- If $\lim_{x \rightarrow \infty} \left(\frac{x^2 + x + 1}{x + 1} - ax - b \right) = 4$, then
 (A) $a = 1, b = -4$ (B) $a = 1, b = 4$ (C) $a = 2, b = -3$ (D) $a = 2, b = 3$
- Find $\lim_{(x,y) \rightarrow (0,0)} \frac{x^6}{y^{10}x^2 + y^{15}}$
 (A) 0 (B) 1 (C) Does not exist (D) ∞
- The value of $\oint_C (x + y)dx + (2x - z)dy + (y + z)dz$, where C is the boundary of the triangle with vertices $(2,0,0)$, $(0,3,0)$ and $(0,0,6)$ is
 (A) 0 (B) 12 (C) 13 (D) 21
- Let vector $\vec{F}(x, y) = \frac{-y\hat{i} + x\hat{j}}{x^2 + y^2}$. The magnitude of the flux of $\vec{\nabla} \times \vec{F}$, through a circular loop of radius 2, centered at the origin, is:
 (A) π (B) 2π (C) 4π (D) 0

11. If the directional derivative of the function $z = y^2 e^{2x}$ at $(2, -1)$ along the unit vector $\alpha \hat{i} + \beta \hat{j}$ is zero, then $|\alpha + \beta|$ equals
 (A) $\frac{1}{2\sqrt{2}}$ (B) $\frac{1}{\sqrt{2}}$ (C) $\sqrt{2}$ (D) $2\sqrt{2}$
12. The solution of the differential equation $\frac{dy}{dx} = \frac{x^2 + xy + y^2}{x^2}$ is:
 (A) $\tan^{-1}\left(\frac{x}{y}\right) = \log y + c$ (B) $\tan^{-1}\left(\frac{y}{x}\right) = \log x + c$
 (C) $\tan^{-1}\left(\frac{x}{y}\right) = \log x + c$ (D) $\tan^{-1}\left(\frac{y}{x}\right) = \log y + c$
13. Length of the arc of the curve $y = f(x)$ between the points whose abscissas a and b is
 (A) $s = \int_a^b \sqrt{\left\{1 + \left(\frac{dy}{dx}\right)^2\right\}} dx$ (B) $s = \int_a^b \sqrt{\left\{1 + \left(\frac{dx}{dy}\right)^2\right\}} dx$
 (C) $s = \int_a^b \sqrt{\left\{1 + \left(\frac{dy}{dx}\right)\right\}} dx$ (D) $s = \int_a^b \sqrt{\left\{1 - \left(\frac{dy}{dx}\right)\right\}} dx$
14. The area of the curve $x^{2/3} + y^{2/3} = 1$ is
 (A) $\frac{3\pi a^2}{2}$ (B) $\frac{3\pi}{8}$ (C) $\frac{4\pi}{5}$ (D) $\frac{4\pi a^2}{5}$
15. The value of integral $\frac{20}{7} \iint_R x e^{x^2 - y^2} dx dy$, where R is the closed region bounded by the lines $y = x, y = x - 1, y = 0$, and $y = 1$.
 (A) $\frac{10}{7}[e^3 + e - 2]$ (B) $\frac{10}{7}[e^3 - e - 2]$
 (C) $\frac{20}{7}[e^3 - e - 2]$ (D) $\frac{20}{7}[e^3 + e - 2]$
16. Solution of the differential equation $xy \frac{dy}{dx} = 1 + x + y + xy$ is
 (A) $(y + x) - \log x = c$ (B) $(y - x) - \log(x(1 + y)) = c$
 (C) $\log(x(1 + y)) = c$ (D) $(y - x) - \log(y(1 + x)) = c$
17. The integrating factor of the differential equation $2 \cos y^2 dx - xy \sin y^2 dy = 0$ is
 (A) x^3 (B) $3x$ (C) e^{-3x} (D) e^x
18. A rectangular frame is to be made 55240 cm long. Determine the value of the length of the rectangle required to maximize the area.
 (A) 24 cm (B) 240 cm (C) 60 cm (D) 120 cm
19. Find the minimum value of $xy + a^3 \left(\frac{1}{x} + \frac{1}{y}\right)$.
 (A) a^2 (B) $3a^2$ (C) a (D) 1
20. Solve $x \frac{d^2y}{dx^2} + \frac{dy}{dx} = 0$
 Which of the following is the solution of above equation, when $x = 0$?
 (A) constant (B) zero (C) undefined (D) 1

21. Given that F and G are vector fields and f is a scalar field, which of the following statement is false?
 (A) $\nabla \cdot (\nabla \times F) = 0$ (B) $\nabla \cdot (F \times G) = (\nabla \times F) \cdot G + F \cdot (\nabla \times G)$
 (C) $\nabla \cdot (fF) = \nabla f \cdot F + f(\nabla \cdot F)$ (D) $\nabla \times (\nabla f) = 0$
22. The inverse Laplace transform of $\frac{se^{-2s}}{s^2-4}$ is
 (A) $\cos 2(t-2) u(t-2)$ (B) $\sin 2(t-2) u(t-2)$
 (C) $\cosh 2(t-2) u(t-2)$ (D) $\sinh 2(t-2) u(t-2)$
 Here $u(t)$ is the unit step function.
23. If $f(t) = \frac{1-\cos 4t}{t}$ then find Laplace transform of $f(t)$
 (A) $\frac{1}{2} \log \left(\frac{s^2+16}{s^2} \right)$ (B) $\frac{s \log s}{\sqrt{s^2+16}}$ (C) $-\frac{s \log s}{\sqrt{s^2+16}}$ (D) $-\frac{\log s}{\sqrt{s^2+1}}$
24. Find the general integral of the linear partial differential equation $xp + yq = z$
 (A) $\phi \left(\frac{x}{y}, \frac{y}{z} \right)$ (B) $\phi(x^2 - z^2, x^3 - y^3) = 0$
 (C) $\phi \left(\frac{y}{z}, x^2 + y^2 + z^2 \right) = 0$ (D) $\phi(x + y + z, xyz) = 0$
25. If every solution of a first order partial differential equation $f(x, y, z, p, q) = 0$ is also a solution of the equation $g(x, y, z, p, q) = 0$, the equations are said to be
 (A) parallel (B) orthogonal (C) separable (D) compatible
26. A complete integral of the equation $pq = 1$ is
 (A) $z = ax^2 + \frac{1}{a}y + b$ (B) $z = ax + \frac{1}{a}y + b$
 (C) $z = ax + \frac{1}{a}y^2 + b$ (D) $z = ax^2 + \frac{1}{a}y^2 + b$
27. Choose the function $f(t)$; $-\infty < t < \infty$, for which a Fourier series cannot be defined
 (A) 1 (B) $\exp(-|t|) \sin(25t)$
 (C) $3 \sin(25t)$ (D) $4 \cos(20t + 3) + 2 \sin(710 t)$
28. In the Taylor series expansion of e^x about $x = 2$, the coefficient of $(x - 2)^4$ is
 (A) $\frac{e^4}{4!}$ (B) $\frac{e^2}{4!}$ (C) $\frac{2^4}{4!}$ (D) $\frac{1}{4!}$
29. Find the sum of $1 + \frac{1}{3^2} + \frac{1}{5^2} + \dots$ using Fourier series expansion if $f(x) = a$ when $[0, \pi]$ and $2\pi - x$ when $[\pi, 2\pi]$.
 (A) $\frac{\pi^2}{8}$ (B) $\frac{\pi^2}{4}$ (C) $\frac{\pi^2}{16}$ (D) $\frac{\pi^2}{2}$
30. For the function e^{-x} , the linear approximation around $x = 2$ is
 (A) $(3 - x)e^{-2}$ (B) $(3 + 2\sqrt{2} - (1 + \sqrt{2})x)e^{-2}$
 (C) $1 - x$ (D) e^{-2}

31. Which of the statement is wrong about Phase Retardation Plate?
(A) Phase difference introduced depends on the wavelength of light used
(B) Unpolarized light cannot be converted into polarized light
(C) Full wave plate can convert circularly polarized light into linearly polarized light
(D) It can convert linearly polarized light into to elliptically polarized light
32. Which of the following statement is wrong about He-Ne laser?
(A) Ne atoms are excited through the collisions with electrons
(B) Stimulated emission takes place between the energy level of Ne
(C) It is four-level laser
(D) Metastable state is offered by He gas
33. A spaceship is moving past Earth at a speed of $0.8c$, where c is the speed of light. The proper length of the spaceship (i.e., the length measured in the spaceship's rest frame) is 150 meters. What is the length of the spaceship as measured by an observer on Earth?
(A) 90 m (B) 120 m (C) 150 m (D) 180 m
34. A quarter wave plate is designed for light of wavelength 600 nm. What is the phase difference introduced between the ordinary and extraordinary rays after passing through the plate?
(A) $\pi/2$ radians (B) π radians (C) $3\pi/2$ radians (D) 2π radians
35. A simple cubic crystal has an atomic radius of 0.2 nm. What is the edge length of the unit cell?
(A) 0.2 nm (B) 0.4 nm (C) 0.5 nm (D) 0.8 nm
36. In a series LCR circuit, the supply voltage is 100 V (rms), resistance is 20 ohms, inductance is 50 mH, and capacitance is 100 μF . What is the current in the circuit at resonance?
(A) 2.5 A (B) 5 A (C) 7.1 A (D) 10 A
37. A particle is in a one-dimensional infinite potential well (box) of width $L=1\text{nm}$, in the ground state. What is the expectation value of its position x ?
(A) 0 nm (B) 0.25 nm (C) 0.5 nm (D) 1 nm
38. An object has a rest mass of 2 kg. What is its relativistic mass when it moves at 0.6 times the speed of light?
(A) 2.5 kg (B) 2.8 kg (C) 3.0 kg (D) 4.0 kg
39. In a double-slit experiment, light of wavelength 600 nm is incident on two slits separated by a distance of 0.5 mm. What is the distance between the first and second bright fringes on a screen placed 2 meters away from the slits?
(A) 0.6 cm (B) 1.2 cm (C) 3.0 cm (D) 6.0 cm
40. Which of the following is NOT a type of point defect in a crystal?
(A) Vacancy defect (B) Interstitial defect (C) Schottky defect (D) Dislocation defect

41. A star is moving away from Earth with a speed of 2×10^5 m/s. If the wavelength of light emitted by the star in its rest frame is 500nm, what is the observed wavelength of the light on Earth?
(A) 400 nm (B) 500 nm (C) 600 nm (D) 760 nm
42. A mass of 0.5 kg is attached to a spring and undergoes simple harmonic motion with an amplitude of 0.2 m. The spring constant k is 50 N/m. What is the maximum speed of the mass during its oscillation?
(A) 0.4 m/s (B) 1.0 m/s (C) 2.0 m/s (D) 4.0 m/s
43. The quality factor of a resonant system is best described as:
(A) The ratio of stored energy to energy dissipated per cycle
(B) The product of the damping coefficient and the oscillation period
(C) The inverse of the bandwidth
(D) Both A and C
44. Fresnel's biprism experiment primarily demonstrates:
(A) Diffraction (B) Polarization (C) Interference (D) Refraction
45. Newton's rings are produced due to the interference of:
(A) Reflected rays from a plano-convex lens and a flat glass surface
(B) Diffracted rays from a single slit
(C) Refracted rays in a prism
(D) Polarized light components
46. The Michelson-Morley experiment is historically significant because it:
(A) Proved the existence of the luminiferous ether
(B) Failed to detect the Earth's motion through the ether
(C) Provided the first measurement of the speed of light
(D) Demonstrated gravitational redshift
47. In Special Relativity, time dilation implies that:
(A) A moving clock runs faster than a stationary clock
(B) A moving clock runs slower than a stationary clock
(C) Time is absolute
(D) Time remains unchanged with relative motion
48. In the photoelectric effect, if the frequency of the incident light is increased (above the threshold frequency), then the kinetic energy of the emitted electrons will:
(A) Increase (B) Decrease (C) Remain the same (D) Become zero

49. The time-independent Schrödinger equation is used to determine:
 (A) The probability density of finding a particle
 (B) The time evolution of a quantum state
 (C) The stationary states and associated energy eigenvalues
 (D) The speed of light
50. In solid state physics, the bond involving the sharing of electron pairs between atoms is known as:
 (A) Ionic bond (B) Metallic bond (C) Covalent bond (D) Van der Waals bond
51. According to molecular orbital theory, which of the lists ranks the nitrogen species in terms of increasing bond order?
 (A) $N_2^{2-} < N_2^- < N_2$ (B) $N_2 < N_2^{2-} < N_2^-$
 (C) $N_2^- < N_2^{2-} < N_2$ (D) $N_2^- < N_2 < N_2^{2-}$
52. Which of the following is paramagnetic?
 (A) CN^- (B) NO^+ (C) CO (D) O_2^-
53. In the structure of ClF_3 , the number of lone pairs of electrons on central 'Cl' atom is
 (A) one (B) two (C) four (D) three
54. In a compound, atoms of element Y form ccp lattice and those of element X occupy $\frac{2}{3}$ rd of tetrahedral voids. The formula of the compound will be
 (A) X_3Y_4 (B) X_4Y_3 (C) X_2Y_3 (D) X_2Y
55. Percentage of free space in cubic close packed structure and in body centred packed structure are respectively
 (A) 32 % and 48 % (B) 48 % and 26 %
 (C) 30 % and 26 % (D) 26 % and 32 %
56. The correct statement regarding defect in solids is
 (A) Schottky defect has no effect on the physical properties of solids
 (B) Frenkel defect is a dislocation defect
 (C) Frenkel defect is usually favoured by a very small difference in the sizes of cations and anions
 (D) Trapping of proton in the lattice leads to the formation of F-centres
57. Which one of the following is not a common component of photochemical smog?
 (A) Ozone (B) Acrolein
 (C) Peroxyacetylnitrate (D) Chlorofluorocarbons
58. The ozone layer forms naturally by
 (A) the interaction of CFC with oxygen
 (B) the interaction of UV radiation with oxygen
 (C) the interaction of IR radiation with oxygen
 (D) the interaction of oxygen and water vapour

59. The correct thermodynamic conditions for the spontaneous reaction at all temperatures is
 (A) $\Delta H < 0$ and $\Delta S > 0$ (B) $\Delta H < 0$ and $\Delta S < 0$
 (C) $\Delta H < 0$ and $\Delta S = 0$ (D) $\Delta H > 0$ and $\Delta S < 0$
60. A gas is allowed to expand in a well-insulated container against a constant external pressure of 2.5 atm from an initial volume of 2.50 L to a final volume of 4.50 L. The change in internal energy ΔU of the gas in joules will be
 (A) -500 J (B) -505 J (C) +505 J (D) 1136.25 J
61. Free energy change is related to enthalpy and entropy changes as:
 (A) $\Delta G = \Delta H - T\Delta S$ (B) $\Delta G = T\Delta S - \Delta H$
 (C) $\Delta G^\circ = \frac{\Delta H - \Delta S}{T}$ (D) $\Delta G = \Delta H + T\Delta S$
62. The complexes $[\text{Co}(\text{NH}_3)_6][\text{Cr}(\text{CN})_6]$ and $[\text{Cr}(\text{NH}_3)_6][\text{Co}(\text{CN})_6]$ are the examples of which type of isomerism?
 (A) Linkage isomerism (B) Ionization isomerism
 (C) Coordination isomerism (D) Geometrical isomerism
63. The hybridization involved in complex $[\text{Ni}(\text{CN})_4]^{2-}$ is: (At. No. Ni=28)
 (A) d^2sp^2 (B) d^2sp^3 (C) dsp^2 (D) sp^3
64. Cobalt (III) chloride forms several octahedral complexes with ammonia. Which of the following will not give test for chloride ions with silver nitrate at 25 °C?
 (A) $\text{CoCl}_3 \cdot 5\text{NH}_3$ (B) $\text{CoCl}_3 \cdot 6\text{NH}_3$ (C) $\text{CoCl}_3 \cdot 3\text{NH}_3$ (D) $\text{CoCl}_3 \cdot 4\text{NH}_3$
65. Number of possible isomers for the complex $[\text{Co}(\text{en})_2\text{Cl}_2]\text{Cl}$ will be: (en = ethylenediamine)
 (A) 3 (B) 4 (C) 2 (D) 1
66. If molality of the dilute solution is doubled, the value of molal depression constant (K_f) will be
 (A) halved (B) tripled (C) unchanged (D) doubled
67. Osmotic pressure of the solution can be increased by
 (A) increasing the temperature of the solution
 (B) decreasing the temperature of the solution
 (C) increasing the volume of the vessel
 (D) diluting the solution
68. Identify the heteropolymer from the list given below
 (A) Polythene (B) Nylon-6 (C) Teflon (D) Nylon-6,6
69. Which polymer is used in the manufacture of paints and Lacquer?
 (A) Polypropene (B) Polyvinyl chloride (C) Bakelite (D) Glyptal
70. Metals do not exist in nature in the form of
 (A) Nitrates (B) Sulphates (C) Carbonates (D) Oxides

71. A DC voltage source is connected across a series RLC circuit. Under steady state conditions, the applied DC voltage drops entirely across the
 (A) R only (B) L only (C) C only (D) R and L combination
72. In a series RLC circuit, $R = 2 \text{ k}\Omega$, $L = 1 \text{ H}$, $C = 1/400 \text{ }\mu\text{F}$. the resonant frequency is
 (A) $2 \times 10^4 \text{ Hz}$ (B) $\frac{1}{\pi} \times 10^4 \text{ Hz}$ (C) 10^4 Hz (D) $2\pi \times 10^4 \text{ Hz}$
73. Three resistances of $7 \text{ }\Omega$ each are connected in delta. The value of the resistances in the equivalent star is
 (A) $2.3 \text{ }\Omega$ (B) $3.5 \text{ }\Omega$ (C) $7 \text{ }\Omega$ (D) $21 \text{ }\Omega$
74. When a sinusoidal signal is applied to purely inductive circuit, the current in the circuit
 (A) Is in phase with the applied voltage (B) Leads the voltage by 90°
 (C) Lags the voltage by 90° (D) Leads the voltage by 180°
75. The output of a transformer at full load and unity power factor is 400 kW . The output at 0.8 power factor and half load is
 (A) 160 kW (B) 200 kW (C) 320 kW (D) 400 kW
76. Reactive power in a balance three-phase system is denoted by
 (A) $3V_L I_L$ (B) $\sqrt{2}V_L I_L$ (C) $\sqrt{3}V_L I_L$ (D) $\sqrt{3}V_L I_L \sin \phi$
77. The average value of a half-wave rectified voltage with a peak value of 40 V is
 (A) 20 V (B) 12.7 V (C) 25.4 V (D) 28.3 V
78. When the peak output voltage is 120 V , the PIV for each diode in a center-tapped full-wave rectifier is (neglecting the diode drop)
 (A) 60 V (B) 120 V (C) 169 V (D) 240 V
79. Consider an arbitrary number system with independent digits as 0 , 1 , and A . The ninth number in this number system would be
 (A) 100 (B) $1A$ (C) $A1$ (D) AA
80. J and K inputs of a negative edge triggered flip-flop are tied to logic-1 state. If the flip-flop were clocked by a 200 kHz waveform, the Q output
 (A) Will remain unchanged (B) Be a 100 kHz waveform
 (C) Be a 200 kHz waveform (D) Be a 400 kHz waveform
81. Which of the following is the correct value of the coefficient of restitution for perfectly elastic bodies.
 (A) 1.0 (B) 0.5 (C) 0.3 (D) ZERO
82. In a graph representing Hooke's Law, where stress is plotted against the strain, what does the gradient of linear portion of the graph represents.
 (A) The elastic limit (B) The limit of proportionality
 (C) The modulus of elasticity (D) The ultimate tensile strength

83. Which of the following chucks in lathe machines is known as Universal chuck.
 (A) Magnetic chuck (B) Face Plate
 (C) Three jaws chuck (D) Four jaws chuck
84. Isometric view of rhombus will become _____
 (A) parallelogram (B) rhombus (C) rectangle (D) square
85. If the maximum and minimum value of the resultant of two forces are 40 units and 20 units respectively, then magnitude of both forces are
 (A) 30,10 units (B) 25,15 units (C) 50,10 units (D) 35,15 units
86. Deviation from ideal behavior will be more if the gas is subjected to
 (A) High temperature and low pressure (B) Low temperature and low pressure
 (C) High temperature and high pressure (D) Low temperature and high pressure
87. Which of the following equation(s)/statement(s) is (are) correct:
 i. $1 \text{ atm} = 14.6959 \text{ lb}_f/\text{in}^2$
 ii. $1 \text{ atm} = 1.01325 \text{ bars}$
 iii. Units of pressure in cgs system is dyne
 (A) Both i and ii are correct (B) Both ii and iii are correct
 (C) Both i and iii are correct (D) Only statement iii is correct
88. The total pressure of mixture of 1 mole of A ($p_A^\circ=150 \text{ torr}$) and 2 mole of B ($p_B^\circ=240 \text{ torr}$) is 200 torr. In this case
 (A) There is positive deviation from Raoult's law
 (B) There is negative deviation from Raoult's law
 (C) There is no deviation from Raoult's law
 (D) Molecular masses of A and B are also required for calculating the deviation
89. It is required to make 1000 kg mixed acid containing 60% H_2SO_4 , 32% HNO_3 , and 8% water by blending i) the spent acid containing 11.3% HNO_3 , 44.4% H_2SO_4 and 44.3% H_2O , ii) aqueous 90% HNO_3 and iii) aqueous 98% H_2SO_4 . All percentages are by weight. The quantities of each of the three acids (spent acid (i), aqueous nitric acid (ii) and aqueous sulphuric acid (iii), respectively) required for blending are
 (A) 70 kg, 360 kg and 570 kg (B) 570.7 kg, 353 kg and 76.3 kg
 (C) 170 kg, 330 kg and 500 kg (D) 76.3 kg, 346 kg and 577.7 kg
90. In which of the following pairs, both properties are intensive?
 (A) Density, Volume (B) Temperature, Entropy
 (C) Temperature, Density (D) Volume, Enthalpy
91. If I had known
 P: I would not
 Q: you were coming
 R: have gone out
 S: at that time
 The proper sequence is:
 (A) QPSR (B) QSPR (C) PQRS (D) QSRP

92. The teacher
P: explain the topic
Q: requested the students
R: patiently to
S: to allow her to
The proper sequence is:
(A) QSPR (B) QSRP (C) RQSP (D) PSRQ
93. Ten dollars _____ not enough for lunch these days.
(A) Are (B) were (C) is (D) have been
94. She reminds me always that I _____ to be a little more careful.
(A) had (B) have (C) must (D) has
95. Choose the correct voice:
"People believe that he writes poetry."
(A) That he writes poetry is believed by people.
(B) He is believed to write poetry.
(C) It is believed that he writes poetry.
(D) Poetry is believed to be written by him.
96. Paralanguage refers to:
(A) The vocabulary of a language (B) Grammar rules used in speaking
(C) The tone, pitch, and speed of speaking (D) Formal language in professional settings
97. The study of body movement and gestures is known as:
(A) Proxemics (B) Chronemics (C) Kinesics (D) Haptics
98. In an organization, grapevine communication refers to:
(A) Official company newsletters
(B) The informal network of communication among employees
(C) Communication channels authorized by management
(D) Formal emails and reports
99. Which communication network is most commonly used in centralized organizations?
(A) All-channel network (B) Wheel network
(C) Chain network (D) Circle network
100. Which of the following is an advantage of a decentralized communication network?
(A) Faster decision-making (B) Clear top-down structure
(C) Enhanced creativity and participation (D) Controlled and structured flow of information

x-x-x

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