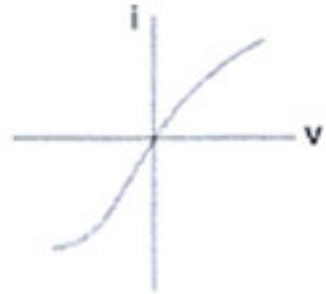
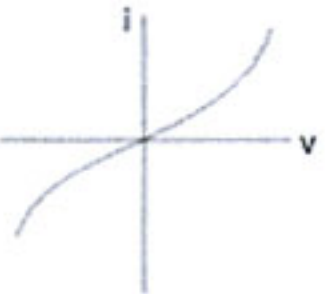
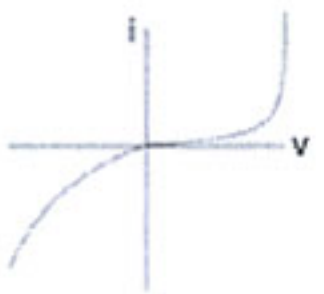


44. A rectangular garden has an area of 48 sq.m and perimeter of 28 m. What is the length of its diagonal?
 (A) 8 m (B) 10 m (C) 12.5 m (D) 14.14 m (approx.)
45. Bile is secreted by-
 (A) Stomach (B) Liver (C) Large intestine (D) Gall bladder
46. Which of these is NOT an Operating System?
 (A) Android (B) iOS (C) Linux (D) Power point
47. No Go Ring Gauge will have diameter based on _____ diameter of the component.
 (A) Minimum tolerance diameter (B) Maximum tolerance diameter (C) Nominal diameter (D) Average diameter
48. Which of the following phenomenon is related to the formation of clouds?
 (A) Condensation (B) Evaporation (C) Sublimation (D) Vulcanization
49. A galvanometer(G) measures upto 100 mA current. It is to be converted to a voltmeter to measure upto 100 volts. What is required to be done?
 (A) Add 100 Ω resistance in series with G (B) Add 1000 Ω resistance in series with G
 (C) Add 1 Ω resistance in parallel with G (D) Add 0.1 Ω resistance in parallel with G
50. Cash-reserve ratio of a commercial bank is fixed by-
 (A) Ministry of Finance (B) Ministry of Commerce (C) RBI (D) Management of the commercial bank
51. What is the purpose of turbo charging a diesel engine?
 (A) Increase power of engine by burning more fuel (B) Increase the fuel injection and rpm
 (C) Increase exhaust gas temperature to increase thermal efficiency (D) Increase inlet air so that engine fuel efficiency and power to weight ratio increases
52. Two bulbs are rated 100W, 220 V each. If these bulbs are connected in series to the mains supply, 220 V, the total power consumed by both the bulbs would be-
 (A) 25 Watts (B) 50 Watts (C) 100 Watts (D) 200 Watts
53. Which of the Current (i) - Voltage (v) graphs represents a p-n junction diode characteristics?
- 


(A)



(B)



(C)



(D)
54. In a building, water is to be pumped to a height of 10m at the rate of 1 litre/second. Power requirement would be approx:
 (Take 'g' 10 m/sec²)
 (A) 10 Watts (B) 100 Watts (C) 500 Watts (D) 1 kW
55. Angle between two sides of a regular polygon having n vertices is:
 (A) $\frac{360}{n}$ (B) $90 + \frac{180}{n}$ (C) $\frac{180}{n}$ (D) $180 - \frac{360}{n}$

56. A software user interface feature that allows the user to view something very similar to the end result while the document is being created is called-
- (A) Format creator (B) Format fidelity (C) WYSIWYG (D) WYGIWYS
57. What is the common property between LiAlH_4 , Sodium amalgam and NaBH_4 ?
- (A) They are used in removing slag from molten metals (B) They are used in manufacturing esters
(C) They are reducing agents (D) They are coated on welding electrodes
58. A person puts 1 grain of rice in the first square of a chess board. In the subsequent squares, he puts twice that of the previous square. How many grains would he need to put on all the squares of the chess board?
- (A) $64!$ (B) $2^{64}-1$ (C) $2^{63}-1$ (D) $p(64, 2)$
59. By what least number should 192,000 be divided so as to become a perfect cube?
- (A) 2 (B) 5 (C) 3 (D) 7

60. Match the following -

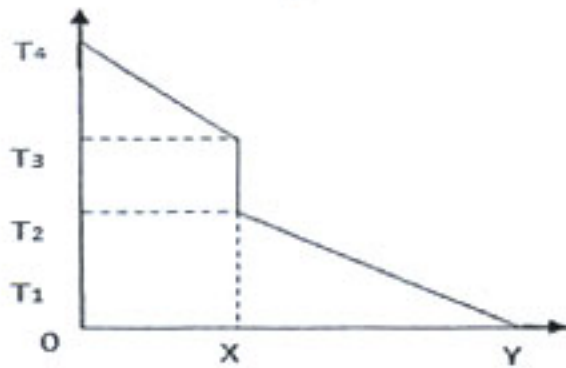
1. Nickel	a. Radiator, Water cooling system
2. Brass	b. Bearings, Gears, Propellers
3. Bronze	c. Hard, Corrosion resistant and used in plating on steel

- (A) 1-b, 2-a, 3-c (B) 1-a, 2-b, 3-c (C) 1-c, 2-a, 3-b (D) 1-a, 2-c, 3-b
61. In a certain code, "All The Best" is written as 534; "Best of Luck" is written as 675; "The Good Luck" is written as 478. In this code "Good" would be written as:
- (A) 8 (B) 7 (C) 6 (D) 5
62. In the context of action of medicines on human body, match the following:

1. Receptors	a. Catalysts
2. Enzymes	b. Neurologically active
3. Tranquilizers	c. Proteins

- (A) 1-c, 2-a, 3-b (B) 1-a, 2-c, 3-b (C) 1-b, 2-a, 3-c (D) 1-a, 2-b, 3-c
63. El Nino effect is:
- (A) Development of low pressure areas in south east Asian region (B) Reduction in ice caps resulting in variation in insolation absorption
(C) Prolonged warming in the Pacific Ocean surface area (D) Sustained tornados in the eastern coast of North America
64. Loudness of noise is measured in-
- (A) Richter (B) Tesla (C) Decibels (D) Hertz
65. Soaps are manufactured by:
- (A) Reaction of alkalies with glycerol (B) Reaction of fats with soluble hydroxides
(C) Reaction of calcium and magnesium ions with dilute sulphuric acid (D) Reaction of dodecyl benzene with H_2SO_4 and then NaOH
66. In a computer system there are softwares and languages at various levels, like High level Language (HL), Machine Language (ML), Compiler (C). Which of the following is the correct indicative representation from user (U) to the computer (COMP)?
- (A) $U \rightleftharpoons HL \rightleftharpoons C \rightleftharpoons ML \rightleftharpoons \text{Comp}$ (B) $U \rightleftharpoons C \rightleftharpoons ML \rightleftharpoons HL \rightleftharpoons \text{Comp}$
(C) $U \rightleftharpoons C \rightleftharpoons HL \rightleftharpoons ML \rightleftharpoons \text{Comp}$ (D) $U \rightleftharpoons ML \rightleftharpoons HL \rightleftharpoons C \rightleftharpoons \text{Comp}$

67. Consider that two solid bodies A and B are touching each other and transmitting heat through conduction. In the graph below, OX represents the first body and XY represents the second body.



State True (T) or False(F).





1) Temperature gradient is more in A than in B

2) The heat flow is determined by Fourier's law

3) Area under the curve represents heat dissipation rate.

- (A) T, T, T (B) T, T, F (C) T, F, T (D) F, F, T
68. Which of the following logic gates is a universal gate i.e. its combinations can be used to construct the logic of any other logic gate?
- (A) OR (B) AND (C) NAND (D) NOT
69. "Mahabharata" the epic was written by-
- (A) Vyasa (B) Kalidasa (C) Tulsidasa (D) Valmiki
70. By which constitutional amendment did the Parliament acquire the right to amend Fundamental Rights?
- (A) 23rd (B) 24th (C) 25th (D) 26th
71. If a cube is broken into 27 equal cubes, the total surface area is increased how many times?
- (A) 3 times (B) 6 times (C) 9 times (D) 27 times
72. If $a : b = 4 : 3$ and $b : c = 7 : 9$, then $a : b : c : ?$
- (A) 24 : 21 : 30 (B) 12 : 15 : 21 (C) 8 : 6 : 12 (D) 28 : 21 : 27
73. English Bond, Flemish Bond, Dutch Bond pertain to-
- (A) Masonry work (B) Cement bonding (C) Bonding between beams (D) Bonding in foundation
74. River Damoder is called the 'Sorrow of _____'.
- (A) Assam (B) Bengal (C) Orissa (D) Uttar Pradesh
75. Which of these devices performs the function of both input device and output device for a computer?
- (A) Joy Stick (B) Mouse (C) Modem (D) Printer
76. A man drives a car 20 km in the North east direction and further 20 km in the South east direction. In which direction will he have to drive to come back to his starting point?
- (A) East (B) West (C) North (D) South
77. Sensitive low voltage electronic components are protected from-
- (A) Static charge (B) Induction circuit (C) Lightening (D) All of these
78. When we switch on an electric bulb or a fan in our house, the appliance starts almost immediately. The drift velocity of electrons in the wires would be close to-
- (A) 1 mm/sec (B) 1 m/sec (C) 3×10^8 m/sec (D) None of these
79. Woolen clothes keep the body warm in winter because-
- (A) Wool is a bad conductor of heat (B) Wool is a good conductor of heat (C) Wool increases body temperature (D) Wool decreases body temperature
80. Chemical bonding which results in formation of molecules from atoms is basically-
- (A) Nuclear force (B) Short range forces (C) Electrostatic force (D) Gravitational force

81. Which of the following statement is correct?
 (A) n linear equations with n variables may have a unique solution
 (B) n linear equations with n variables may have no solution
 (C) Both A & B are correct
 (D) Both A & B are wrong
82. "Common Base" configuration refers to the configuration of a-
 (A) Rectifier
 (B) Transistor
 (C) Diode
 (D) Inverter
83. The transformer equation $V_1 I_1 = V_2 I_2$ is the manifestation of-
 (A) Ampere's law
 (B) Coloumb's law
 (C) Law of energy conservation
 (D) Biot Savart's law
84. Who wrote/invented the Linux software?
 (A) Microsoft
 (B) Apple INC
 (C) IBM
 (D) None of these
85. What is the common between Rockwell, Brinell and Shore? They pertain to-
 (A) Surface finish
 (B) Heat treatment
 (C) Metal turning
 (D) Hardness
86. Which of the following information is NOT contained in engineering drawings?
 (A) Tolerances
 (B) Material composition
 (C) Surface finish
 (D) All of these are included in engineering drawing
87. Which of the following statements is true?
 (A) Value of $\sin\theta$ increases with increase in θ
 (B) Value of $\cos\theta$ decreases with increase in θ
 (C) Between 0° & 90° , value of $\cot\theta$ increases with increase in θ
 (D) Between 0° & 90° , value of $\tan\theta$ decreases with decrease in θ
88. Strength of commonly used concrete, for constructing low rise residential buildings is:
 (A) 300 psi
 (B) 8000 psi
 (C) 15000 psi
 (D) 25000 psi
89. If $12a+6b=54$, what is the average of a & b ?
 (A) 2.25
 (B) 4.5
 (C) 6
 (D) Data insufficient
90. Which of the following tissues transports water and minerals from roots to other parts of the plant?
 (A) Phloem
 (B) Vessel
 (C) Sieve tube
 (D) Xylem
91. Consider the following truth table in Boolean Algebra. 2
- | X | Y | A | B | C | D |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 1 | 1 |
| 0 | 1 | 1 | 0 | 0 | 0 |
| 1 | 0 | 0 | 1 | 1 | 0 |
| 1 | 1 | 1 | 1 | 0 | 1 |
- Which of the four options A, B, C, D represent the function
 $F = xy + xy'$?
- (A) A
 (B) B
 (C) C
 (D) D
92. A tuning fork when sounded together with another tuning fork of known frequency of 240 Hz, emits 2 beats. On loading the tuning fork of known frequency the number of beats heard are one per second. The frequency of the tuning fork is:
 (A) 241 Hz
 (B) 242 Hz
 (C) 239 Hz
 (D) 238 Hz
93. Based on the choice of the 'Q' point on the current voltage characteristics of the transistor, the amplifiers are classified as:
 (A) Class I, II, III and IV
 (B) Class A, B, C and AB
 (C) Class A, B, C and D
 (D) Class IA, IB, IIA and IIB
94. Find the next number in the series.
 1, 2, 6, 24, 120, _____.
 (A) 240
 (B) 480
 (C) 560
 (D) 720

95. A, B & C invest ₹ 26000, ₹ 34000 and ₹ 10000 respectively in a business. They earn a profit of ₹ 3500. B's share in the profit is:
 (A) ₹ 1200 (B) ₹ 1500 (C) ₹ 1700 (D) ₹ 1900
96. A shop reduced the price of an article by 25%. Its sale for that article increased by 25%. What is the net effect on sales in rupees?
 (A) No change (B) Increase by 5.75% (C) Decrease by 5.75% (D) Decrease by 6.25%
97. An eating disorder of excessive weight loss usually due to undue concern about body shape is known as:
 (A) Anorexia nervosa (B) Appetitis (C) Autotrophic disorder (D) Autotrophic syndrome
98. Complete the series:
 ab ab b aba aab
 (A) bbab (B) abaa (C) aaaa (D) aaab
99. Find the value of:
 $3 + 0.03 + 0.003 + 0.0003$
 (A) 12 (B) 3.0333 (C) 3.3333 (D) 6.0333
100. Currently which 5 year plan is under execution in India?
 (A) 12th (B) 13th (C) 14th (D) 15th
101. Who authored the book "My Experiments with Truth"?
 (A) Abraham Lincoln (B) Mark Twain (C) Louis Carol (D) M.K Gandhi
102. Which of the following Venn diagram represents the relationship between Human beings, Educated and Teachers?
 (A)  (B)  (C)  (D) 
103. A technique of anonymous communication over a computer network using encryption of messages and splitting between the nodes, is called-
 (A) Spice routing (B) Onion routing (C) Cabbage routing (D) Flower routing
104. In a transistor radio, a frequency tuner circuit that was conventionally used, would consist of-
 (A) An inductor and a variable capacitor in parallel (B) A bridge rectifier diode feeding the base of a transistor through variable resistance
 (C) A multiple coil variac (D) A potentiometer with variable resistance
105. The famous queen Chand Bibi who fought against Akbar, defended the city of -
 (A) Berar (B) Ahmad nagar (C) Golconda (D) Mysore
106. Tachymeter (or Tacheometer) is an instrument for measuring-
 (A) rpm (B) Torque (C) Rotational kinetic energy (D) Distances
107. Which of the following is NOT used for measurement of temperature?
 (A) Thermocouples (B) Thermistors (C) Pyrometers (D) All are used
108. Processing speed of computer is measured in-
 (A) MIPS (Million Instruction Per Second) (B) MHz of clock
 (C) Both (A) and (B) (D) None of these
109. Lufthansa Airlines is from which country?
 (A) USA (B) Malaysia (C) Germany (D) Russia