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Test Booklet Series

Serial No.

108229

A

SCREENING TEST – 2010

SUBJECT : SUPERINTENDENT – ITI

Time Allowed : Two Hours

Maximum Marks : 120

INSTRUCTIONS

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4. This Booklet contains **120** items (questions). Each item comprises four response (answers). You will select one response which you want to mark on the Respons Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each item.
5. In case you find any discrepancy, in this test booklet in any question(s) or the Responses, a written representation explaining the details of such alleged discrepancy, be submitted within three days, indicating the Question No(s) and the Test Booklet Series, in which the discrepancy is alleged. Representation not received within time shall not be entertained at all.
6. You have to mark all your responses **ONLY** on the separate Response Sheet provided. See directions in the Response Sheet.
7. All items carry equal marks. Attempt **ALL** items. Your total marks will depend only on the number of correct responses marked by you in the Response Sheet.
8. Before you proceed to mark in the Response Sheet the response to various items in the Test Booklet, you have to fill in some particulars in the Response Sheet as per instructions sent to you with your Admit Card and Instructions.
9. While writing Centre, Subject, and Roll No. on the top of the Response Sheet in appropriate boxes use **"ONLY BALL POINT PEN"**.
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DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE ASKED TO DO SO

(For Rough Work)

108338

RESEARCH REPORT

Screening Test - 2010
(Superintendent - ITI)

Time Allowed : Two Hours]

[Max. Marks : 120

1. The given matrix $A = \begin{bmatrix} 4 & 2+i \\ -2+i & 1 \end{bmatrix}$ is :

- (a) Hermitian matrix
- (b) Symmetric matrix
- (c) Skew-Hermitian matrix
- (d) None of these

2. Multiplication of the following matrices are $\sigma_x = \begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$ $\sigma_y = \begin{bmatrix} 0 & -i \\ i & 0 \end{bmatrix}$

$$\sigma_z = \begin{bmatrix} 1 & 0 \\ 0 & -1 \end{bmatrix} :$$

- (a) anti-commutative
- (b) associative
- (c) distributive
- (d) Above all

3. The value of given determined is

$$\begin{bmatrix} 1 & 1 & w \\ 1 & 1 & w^2 \\ w^2 & w & 1 \end{bmatrix} \text{ where } w^3 = 1 \text{ but } w \neq 1 :$$

- (a) w
- (b) w^2
- (c) -3
- (d) 0

4. The area of a triangle with vertices $A(5, 4)$, $B(-2, 4)$ and $C(2, -6)$ is :

- (a) 35.6 sq. units
- (b) 35.0 sq. units
- (c) 34.8 sq. units
- (d) 35.2 sq. units

5. The differential equation :

$$y^2 - x^2 = 2xy \frac{dy}{dx} \text{ for :}$$

- (a) all circles touching y -axis at the origin
- (b) all circles touching x -axis at the origin
- (c) all circles touching x -axis and y -axis at the origin
- (d) None of these

6. The integrating factor of the given differential equation :

$$(x \log x) \frac{dy}{dx} + y = 2 \log x$$

- (a) $\log(\log x)$
- (b) e^x
- (c) $\log x$
- (d) x

7. If p and q are the order and degree of the differential equation :

$$y \frac{dy}{dx} + x^3 \frac{d^2y}{dx^2} + xy = \cos x$$

then :

- (a) $p < q$
- (b) $p = q$
- (c) $p > q$
- (d) None of these

8. A pair of dice is thrown. If the two numbers appearing on them are different, then what is the required probability if the sum of the numbers is six?

- (a) $\frac{2}{15}$
(b) $\frac{1}{15}$
(c) $\frac{3}{15}$
(d) $\frac{4}{15}$

9. A random variable has the following probability distribution:

x	: 0	1	2	3	4	5	6	7
$p(x)$: 0	$2n$	$2n$	$3n$	n^2	$2n^2$	$7n^2$	$2n$

The value of n is:

- (a) $\frac{1}{5}$
(b) $\frac{-1}{10}$
(c) $\frac{1}{10}$
(d) $\frac{-1}{5}$

10. If the mean and variance of a binomial variable X are 2 and 1 respectively then the probability that X takes a value greater than 1 is:

- (a) $\frac{2}{3}$
(b) $\frac{4}{5}$
(c) $\frac{7}{8}$
(d) $\frac{15}{16}$

11. What is angle between two vectors \vec{a} and \vec{b} having the same length $\sqrt{2}$ and their scalar product is -1 ?

- (a) $\frac{2\pi}{3}$
(b) $\frac{\pi}{3}$
(c) $\frac{\pi}{6}$
(d) $\frac{3\pi}{4}$

12. If $|\vec{a}| = 10$ and $|\vec{b}| = 2$ and $\vec{a} \cdot \vec{b} = 12$ then $|\vec{a} \times \vec{b}|$ is:

- (a) 16
(b) 15
(c) 14
(d) 12

13. The area of a triangle whose vertices are $A(3, -1, 2)$, $B(1, -1, -3)$ and $C(4, -3, 1)$:

- (a) $\frac{1}{2}\sqrt{145}$
(b) $\frac{1}{2}\sqrt{135}$
(c) $\frac{1}{2}\sqrt{155}$
(d) $\frac{1}{2}\sqrt{165}$

14. The value of $\lim_{x \rightarrow a} \frac{x\sqrt{x} - a\sqrt{a}}{x - a}$:

- (a) $\frac{2}{3}\sqrt{a}$
(b) $\frac{3}{2}\sqrt{a}$
(c) 0
(d) 1

15. The domain of the given function

$$f(x) = \frac{1}{\sqrt{1-x}} :$$

- (a) $[1, \infty)$
- (b) $(-\infty, 1)$
- (c) $(-\infty, 1]$
- (d) None of these

16. The function $f(x) = \begin{cases} e^{1/x} - 1 & x \neq 0 \\ 0 & x = 0 \end{cases}$

- (a) is continuous at $x = 0$
- (b) is not continuous at $x = 0$
- (c) is not continuous at $x = \infty$
- (d) is continuous at $x = -\infty$

17. The radius of a sphere is increasing at the rate of 0.2 cm/sec. What is the rate at which the volume of the sphere increases when radius is 15 cm ?

- (a) $12 \pi \text{ cm}^3 / \text{sec}$
- (b) $225 \pi \text{ cm}^3 / \text{sec}$
- (c) $3 \pi \text{ cm}^3 / \text{sec}$
- (d) $180 \pi \text{ cm}^3 / \text{sec}$

18. The point on the curve $y^2 = x$ where tangent makes 45° angle with x -axis is :

- (a) $\left(\frac{1}{2}, \frac{1}{4}\right)$
- (b) $\left(\frac{1}{4}, \frac{1}{2}\right)$
- (c) $(2, 4)$
- (d) $(4, 2)$

19. The value of C in Rolle's theorem for function $f(x) = x^3 - 3x$ in the interval $[0, \sqrt{3}]$ is :

- (a) 1
- (b) -1
- (c) $3/2$
- (d) $1/3$

20. The value of the given integration $\int \sec^3 x \tan x \, dx :$

- (a) $\frac{\sec^3 x}{3} + C$
- (b) $\frac{1}{3} \tan^3 x + C$
- (c) $\frac{1}{3} \sec x \tan x + C$
- (d) $\frac{1}{3} \operatorname{cosec}^3 x + C$

21. The maximum value of $5x + 7y$ subject to the constraints :

$$x + y \leq 4$$

$$3x + 8y \leq 24$$

$$10x + 7y \leq 35$$

$$x, y \geq 0$$

- (a) 24.8
- (b) 24.2
- (c) 25.4
- (d) None of these

Note : Use graph paper to solve.

22. The value of k which makes

$$f(x) = \begin{cases} \sin \frac{1}{x}, & x \neq 0 \\ k, & x = 0 \end{cases} \text{ continuous at } x = 0 :$$

- (a) 8
- (b) 1
- (c) -1
- (d) None of these

23. Find the point on the curve $y = \cos x - 1$, $x \in \left[\frac{\pi}{2}, \frac{3\pi}{2} \right]$ at which the tangent is parallel to the x -axis :

- (a) $(\pi, -2)$
- (b) $\left(\frac{\pi}{3}, -2 \right)$
- (c) $\left(\frac{\pi}{6}, -2 \right)$
- (d) $\left(\frac{\pi}{4}, -2 \right)$

24. If $s = t^3 - 4t^2 + 5$ describes the motion of a particle then what is the velocity when the acceleration vanishes :

- (a) $-\frac{16}{3}$ units/sec
- (b) $-\frac{32}{3}$ units/sec
- (c) $\frac{16}{9}$ units/sec
- (d) $\frac{4}{9}$ units/sec

25. $y = A \cos \omega t + B \sin \omega t$ is the general solution of the differential equation :

- (a) $y'' + y' = 0$
- (b) $y'' = -\omega^2 y$
- (c) $y'' - \omega^2 y = 0$
- (d) $y'' + y = 0$

26. Which of the following will be the best oxidizing agent ?

- (a) Cl_2
- (b) Fe
- (c) Na^+
- (d) F^-

27. Which of the following collections of sub atomic particles would have the greatest mass ?

- (a) 4 electrons and 1 proton
- (b) 2 neutrons and 1 electron
- (c) 1 proton and 2 neutrons
- (d) 1 proton, 1 neutron and 1 electron

28. A covalent bond in which there is an unequal sharing of bonding electron is a :

- (a) single covalent bond
- (b) double covalent bond
- (c) triple covalent bond
- (d) polar covalent bond

29. A voltaic cell is set up with two half cells. In the first half cell, a silver electrode is placed in an aqueous solution containing Ag^+ ions. In the second half cell, a nickel electrode is placed in an aqueous solution containing Ni^{2+} ions. The silver electrode is the and has a charge :
- cathode; positive
 - cathode; negative
 - anode; positive
 - anode; negative
30. Which of the following solutions has the lowest freezing point ?
- 0.50 M KNO_3
 - 0.50 M $MgSO_4$
 - 0.50 M Na_3PO_4
 - 0.50 M $K_2Cr_2O_7$
31. A voltaic cell contains one half cell with a zinc electrode in a Zn^{2+} (aq) solution and a copper electrode in a Cu^{2+} (aq) solution. At saturated condition, $E^\circ = 1.10$ V, which condition below would cause the cell potential to be greater than 1.10 V ?
- 5.0 M Zn^{2+} (aq); 5.0 M Cu^{2+} (aq)
 - 5.0 M Zn^{2+} (aq); 1.0 M Cu^{2+} (aq)
 - 0.5 M Zn^{2+} (aq); 0.5 M Cu^{2+} (aq)
 - 0.1 M Zn^{2+} (aq); 1.0 M Cu^{2+} (aq)

32. An aqueous solution of potassium iodide, KI is heated from $25^\circ C$ to $85^\circ C$. During the time period while the solution is being heated, which of the following is *true* ?
- The mole fraction of solution decreases
 - The density of the solution is constant
 - The molarity of the solution is constant
 - The molality of the solution is constant

33. Which of the following aqueous solutions has the highest boiling point ?
- 0.10 M Sodium fluoride (NaF)
 - 0.10 M Ammonium hydroxide (NH_4OH)
 - 0.10 M Magnesium chloride ($MgCl_2$)
 - 0.10 M Nitric acid (HNO_3)

34. If the free energy, ΔG° for a reaction is negative, what must the value of the equilibrium constant, K , be for that reaction :
- $K > 1$
 - $K < 1$
 - $K = 1$
 - $K = 0$

35. Which of the following reactions involves the largest increase in entropy?
- (a) $\text{AgNO}_3(\text{aq}) + \text{HCl}(\text{aq}) \rightarrow \text{AgCl}(\text{s}) + \text{HNO}_3(\text{aq})$
- (b) $\text{N}_2(\text{g}) + \text{O}_2(\text{g}) \rightarrow 2\text{NO}(\text{g})$
- (c) $2\text{NO}(\text{g}) + \text{O}_2(\text{g}) \rightarrow 2\text{NO}_2(\text{g})$
- (d) $2\text{KClO}_3(\text{s}) \rightarrow 2\text{KCl}(\text{s}) + 3\text{O}_2(\text{g})$
36. The reaction is spontaneous only at high temperature. The signs of ΔH° and ΔS° must be:
- (a) $\Delta H^\circ = +, \Delta S^\circ = +$
- (b) $\Delta H^\circ = +, \Delta S^\circ = -$
- (c) $\Delta H^\circ = -, \Delta S^\circ = +$
- (d) $\Delta H^\circ = -, \Delta S^\circ = -$
37. The correct electron configuration in the ground state for Mn^{3+} (in order of increasing energy is):
- (a) $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^5$
- (b) $1s^2 2s^2 2p^6 3s^2 3p^6 3d^4$
- (c) $1s^2 2s^2 3s^2 4s^2 2p^6 3p^6 3d^5$
- (d) $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5$
38. The shape of a PH_3 molecule is:
- (a) trigonal pyramidal
- (b) tetrahedral
- (c) bent
- (d) trigonal planar
39. Arrange the following ions in order of increasing ionic radius: Mg^{2+} , F^- and O^{2-} :
- (a) $\text{O}^{2-} < \text{F}^- < \text{Mg}^{2+}$
- (b) $\text{Mg}^{2+} < \text{O}^{2-} < \text{F}^-$
- (c) $\text{Mg}^{2+} < \text{F}^- < \text{O}^{2-}$
- (d) $\text{O}^{2-} < \text{Mg}^{2+} < \text{F}^-$
40. How many cesium and chloride ions are there in a single unit cell of CsCl ?
- (a) 1 Cs and 1 Cl
- (b) 2 Cs and 1 Cl
- (c) 1 Cs and 2 Cl
- (d) 2 Cs and 2 Cl
41. Which of the following ligands is *not* a monodentate?
- (a) CH_3NH_2
- (b) $\text{C}_2\text{O}_4^{2-}$
- (c) Br^-
- (d) CH_3CN
42. The basic difference between a monomer of polyethylene and a monomer of polyvinyl chloride is:
- (a) the replacement of a hydrogen by a chlorine
- (b) the addition of four fluorines
- (c) the elimination of double bonds
- (d) the removal of all hydrogen

43. Many synthetic polymers become a problem in the environment because they :
- decompose to nutrients, which accelerates plant growth
 - do not readily decompose and tend to accumulate
 - do not contain vitamins as natural materials do
 - become a source of food for fish, but ruin the flavour of fish meat
44. Saponification involves the reaction of :
- ethanol with oxygen
 - ethanol with ethanoic acid
 - ester with sodium hydroxide
 - ethanoic acid with sodium carbonate
45. Which of the following statements concerning types of elements is *correct* ?
- There are more noble gas elements than transition elements
 - There are more 'S area' elements than 'P area' elements
 - There are more non-metals than metals
 - There are more representative elements than inner transition elements
46. Peroxides and Superoxide ions are respectively :
- diamagnetic and diamagnetic
 - diamagnetic and paramagnetic
 - paramagnetic and diamagnetic
 - paramagnetic and paramagnetic
47. What is the osmotic pressure of a 0.100 - molar saline solution ? (NaCl dissolved in H_2O) at 27°C ?
- 0.22 atm
 - 0.44 atm
 - 2.5 atm
 - 4.9 atm
48. When a system experiences the following two conditions, the ΔE is always negative :
- Absorbs heat and does work
 - Absorbs heat and has work done on it
 - Release heat and does work
 - Release heat and has work done on it
49. An electrolytic cell contains molten CuBr_2 . What is the minimum voltage that must be applied to begin electrolysis ?
- 0.17 V
 - 0.34 V
 - 0.73 V
 - 1.07 V

50. Which of the following substances would you expect to have the lowest boiling point ?
- diamond
 - ammonia, NH_3
 - sodium acetate, $NaC_2H_3O_2$
 - glycerine, $C_3H_5(OH)_3$
51. A charged particle moving in an uniform magnetic field describes a trajectory which, in general is :
- circular
 - elliptical
 - parabolic
 - helical
52. In a Deuterium Tritium fusion reaction, the energy release is typically of the order of :
- ~ 5.8 MeV
 - ~ 17.6 MeV
 - ~ 1.2 KeV
 - ~ 2.8 GeV
53. Which of the following photoconductors is used as a detector for visible electromagnetic radiations ?
- Cds
 - Pbs
 - Ge : Au
 - Hg Cd Te
54. The band gap energy of Si (silicon) semiconductor is about :
- 0.1 eV
 - 0.74 eV
 - 1.1 eV
 - 1.4 eV
55. The magnetic field inside at the axis of a long straight uniform wire of radius R carrying current I is :
- 0
 - $\mu_0 I / (2\pi R)$
 - $\frac{\mu_0 I}{R}$
 - $\frac{\mu_0 I}{2R}$
56. For a photon of energy E , the momentum is :
- $\frac{\sqrt{E}}{C}$
 - \sqrt{EC}
 - $\sqrt{E/C}$
 - E/C
57. The de Broglie wavelength of 1 mg grain of sand blown by the wind at a speed of 20 m/sec is :
- 33×10^{-29} m
 - 3.3×10^{-29} m
 - 3.3×10^{-31} m
 - 1.65×10^{-29} m

58. The photoelectric effect is a phenomenon associated with radiations in:
- visible region
 - infra-red region and visible region
 - γ -ray wavelength region
 - visible and ultraviolet regions
59. In photoelectric effect, the photoelectron energy depends on:
- the frequency of incident light
 - the intensity of the incident light
 - the phase of the incident light
 - the polarisation of the incident light
60. The ground state energy of hydrogen atom is -13.6 eV. The potential energy of the electron in this state is:
- 0 eV
 - -27.2 eV
 - -13.6 eV
 - $+13.6$ eV
61. A conducting ring of radius 1 meter is placed in an oscillating uniform magnetic field B of 0.01 Tesla with its plane at right angles to B . If the frequency of oscillation is 100 Hz, the induced electric field in the ring will be:
- 12 volts
 - 10 volts
 - $\frac{10}{2\pi}$ volts
 - π volts
62. In a combination of two thin lenses of focal lengths 5 cm and 3 cm, respectively and made up of same material, the condition for achromatism requires that their separation is:
- 4 cm
 - 8 cm
 - 15 cm
 - 2 cm
63. In a Young's double slit experiment, the separation of slits is 2 mm and fringe spacing is 0.3 mm at a distance of 1 meter from the slits. The wavelength of the light used in the experiment is:
- $0.15 \mu\text{m}$
 - $0.6 \mu\text{m}$
 - $6 \mu\text{m}$
 - $1.5 \mu\text{m}$
64. A series RLC circuit is connected across a voltage source of $V = 200 \sin 300 t$. If $R = 500 \Omega$, $L = 1\text{H}$, $C = 2 \mu\text{F}$, the average power delivered to the circuit is:
- ~ 1.18 watts
 - ~ 4.72 watts
 - ~ 11.8 watts
 - ~ 4.72 m watts

65. A laser traverses a fibre optic cable of 100 meters. The power at the input and output ends of the cable is 1 mW and 0.2 mW, respectively. The attenuation of the fibre optic cable is :

- (a) ~ 5 dB/Km
- (b) ~ 20 dB/Km
- (c) ~ 50 dB/Km
- (d) ~ 70 dB/Km

66. Nuclear forces are effective only at short ranges of the order of :

- (a) 1 picometer
- (b) 1 fermi or less
- (c) 1 nanometer or less
- (d) 1 Angstrom or less

67. A laser beam is incident from a medium with refractive index n_1 , on an interface with another material of refractive index n_2 such that $n_1 > n_2$. The critical angle for total internal reflection is :

- (a) $\sin^{-1}\left(\frac{n_1}{n_2}\right)$
- (b) $\sin^{-1}\left(\frac{n_2}{n_1}\right)$
- (c) $\tan^{-1}\left(\frac{n_2}{n_1}\right)$
- (d) $\tan^{-1}\left(\frac{n_1}{n_2}\right)$

68. A magnetic dipole of moment $\vec{m} = 10(\hat{i} + \hat{j} + \hat{k})$ Am² is placed in an uniform field of $\vec{B} = 0.6\hat{i} + 0.4\hat{j} + 0.5\hat{k}$ Wb/m². The torque experienced by the dipole is :

- (a) $\hat{i} + \hat{j} - 2\hat{k}$ N.m
- (b) 15 N.m
- (c) $\hat{i} - \hat{j} - 2\hat{k}$ N.m
- (d) $\hat{i} + \hat{j} + 2\hat{k}$ N.m

69. An electric dipole of strength 100 \hat{z} pico-coulomb-meter is located at the origin (0, 0, 0). The electrostatic potential at the point (0, 0, 10) is :

- (a) 0 V
- (b) 9 mV
- (c) 10 mV
- (d) 100 mV

70. The electrical energy stored in a parallel plate capacitor of capacity C with voltage V across the plates is :

- (a) $\frac{1}{2}CV^2$
- (b) CV^2
- (c) $\frac{1}{2}\frac{V^2}{C}$
- (d) $\frac{V^2}{C}$

71. If the electron density in ionosphere is 4×10^6 per C.C., the maximum frequency of electromagnetic waves which can be used for skywave propagation is about :

- (a) $\sim 18 \text{ MHz}$
- (b) $\sim 1.8 \text{ MHz}$
- (c) $\sim 1.6 \text{ MHz}$
- (d) $\sim 3.6 \text{ MHz}$

72. For a distortionless propagation of signals in a transmission line, it is necessary that :

- (a) attenuation constant is zero
- (b) attenuation constant and phase velocity of signals is independent of frequency
- (c) attenuation constant and phase velocity vary linearly with frequency
- (d) attenuation constant varies linearly with frequency but phase velocity varies in an inverse manner with frequency

73. If $\rho_v(r')$ represents continuous charge distribution, then the potential at a location \vec{r} is given by :

- (a) $\frac{1}{4\pi\epsilon_0} \int \frac{\rho_v(\vec{r}') dv'}{|\vec{r} - \vec{r}'|}$
- (b) $\frac{1}{4\pi\epsilon_0} \int \frac{\rho_v(\vec{r}') dv'}{r'}$
- (c) $\frac{1}{4\pi\epsilon_0} \int \frac{\rho_v(\vec{r}') dv'}{r}$
- (d) $\frac{1}{4\pi\epsilon_0} \int \frac{\rho_v(\vec{r}') d\rho}{|\vec{r} - \vec{r}'|}$

74. If N is the number of free electrons per unit volume in a conductor and σ is the electrical conductivity of the conductor, the mobility of electrons is given by :

- (a) $\frac{\sigma}{e}$; e is the electronic charge
- (b) $\frac{N\sigma}{e}$
- (c) $\frac{\sigma}{Ne}$
- (d) $\sigma\sqrt{\frac{N}{e}}$

75. The heat production per unit volume in a current (J) carrying conductor with a temperature gradient $\left(\frac{dT}{dz}\right)$ along the length of the conductor is (ρ is the resistivity of material) :

- (a) $\rho J^2 - \mu J \frac{dT}{dz}$; μ is the Thomson coefficient
- (b) $\rho J^2 + \mu J \frac{dT}{dz}$
- (c) $\mu J \frac{dT}{dz}$
- (d) $\rho J^2 - \mu J^2 \frac{dT}{dz}$

76. AVI is file format for :

- (a) Video
- (b) Audio
- (c) Text
- (d) Image

77. Excel workbooks contain several :
- (a) Pages
 - (b) Chapters
 - (c) Worksheets
 - (d) None of the above
78. Which one of the following is a non-erasable storage device ?
- (a) Floppy Disk
 - (b) Magnetic Tapes
 - (c) CD-ROM
 - (d) RAM
79. Wizard is :
- (a) A user interface element
 - (b) An Expert System
 - (c) A dialog box
 - (d) None of the above
80. To see how a word page will be printed use :
- (a) Page break Preview
 - (b) Page break
 - (c) Page Preview
 - (d) Print Preview
81. Copyright is system to protect the :
- (a) Author
 - (b) The retailer
 - (c) The wholesaler
 - (d) None of the above

82. Software piracy is :
- (a) Free use of software
 - (b) Unauthorized copying of software
 - (c) Open use of software
 - (d) All of the above
83. Computer virus is a :
- (a) Self replicating program
 - (b) Program with frequently destructive side effects
 - (c) Both (a) and (b)
 - (d) None
84. C-Brain Virus was developed in :
- (a) India
 - (b) Pakistan
 - (c) USA
 - (d) Israel
85. Which one of the following is *not* an anti-virus software ?
- (a) Worm
 - (b) Norton
 - (c) E-trust
 - (d) AVG
86. Which of the following is part of Microsoft Office ?
- (a) Word
 - (b) Excel
 - (c) Power Point
 - (d) All of the above

87. Control-I in MS Word is used for :
- (a) Inserting page numbers in the document
 - (b) Indenting a paragraph
 - (c) Making a selected text italic
 - (d) None of the above
88. When the text is automatically goes onto next line is called :
- (a) Line wrap
 - (b) Word wrap
 - (c) Text wrap
 - (d) Page wrap
89. To move a block of text one would use :
- (a) Cut & Copy
 - (b) Copy & Paste
 - (c) Cut & Paste
 - (d) Move Block
90. To create a Table in MS Word one would use :
- (a) Insert Table
 - (b) Draw Table
 - (c) Create Table
 - (d) None of the above
91. What is the other name for a LAN card ?
- (a) NIC
 - (b) Network connector
 - (c) Modem
 - (d) Internet Card

92. Web directories use :
- (a) Top-down approach for finding information on the web
 - (b) Bottom-up approach for finding information on the web
 - (c) Both top-down and bottom-up
 - (d) Neither top-down not bottom-up
93. HTML stands for :
- (a) Hyper Text Markup Language
 - (b) Hyper Text Manipulation Language
 - (c) Hyper Text Managing Links
 - (d) Hyper Text Manipulating Links
94. Which one of the following protocol is used in email service ?
- (a) Telnet
 - (b) POP3
 - (c) FTP
 - (d) SNMP
95. Which one of the following is *not* an ISP ?
- (a) ERNET India
 - (b) BSNL
 - (c) Reliance
 - (d) Infotech India Limited

96. Multimedia integrates information about :
- (a) Image and video only
 - (b) Sound and video only
 - (c) Text, sound and video only
 - (d) Text, sound, image and video
97. A pixel is :
- (a) A computer program that draws picture
 - (b) A picture stored in secondary memory
 - (c) The smallest resolvable part of a picture
 - (d) None of these
98. RAM stands for :
- (a) Read Access Memory
 - (b) Random Access Memory
 - (c) Random Allocation Memory
 - (d) Random Array Memory
99. Which one of the following is true ?
- (a) Gigabyte < Megabyte < Kilobyte
 - (b) Gigabyte > Kilobyte > Megabyte
 - (c) Megabyte > Kilobyte > Gigabyte
 - (d) Gigabyte > Megabyte > Kilobyte
100. MPEG stands for :
- (a) Motion Pictures Experts Group
 - (b) Moving Pictures Experts Group
 - (c) Motion Pictures Experts Graphics
 - (d) Moving Pictures Experts Graphics
101. Which of the following words means 'a place where grain is stored' ?
- (a) grainery
 - (b) granary
 - (c) grainary
 - (d) granery
102. The feminine form of 'dog' is :
- (a) doggie
 - (b) doggy
 - (c) bitch
 - (d) witch
103. A doctor who specializes in training heart ailments is called :
- (a) cardiologist
 - (b) cartographer
 - (c) heartologist
 - (d) heartier
104. What is the antonym of 'inferior' ?
- (a) ferior
 - (b) outferior
 - (c) superb
 - (d) superior
105. Which of the following sentences use the phrase 'on account of' correctly ?
- (a) I have fifty thousand rupees on account of my bank.
 - (b) You have to start running on account of three.
 - (c) I could not come to office on account of rain.
 - (d) Have you kept on account of the expenses ?

106. Which of the following is the correct passive voice form of 'she will teach us' ?
- (a) We will be taught by her.
 - (b) She will be taught by us.
 - (c) We would have been taught by her.
 - (d) We will teach her.
107. Which of the following sentences is correct in all respects ?
- (a) He road his bicycle everyday.
 - (b) He rode his bicycle everyday.
 - (c) He rod his bicycle everyday.
 - (d) He wrode his bicycle everyday.
108. Which of the following is *not* a correct form to sign off an official letter ?
- (a) Yours faithfully
 - (b) Yours sincerely
 - (c) Yours truly
 - (d) Yours affectionately
109. Which of the following is *not* a pair of homophones ?
- (a) hair/heir
 - (b) rest/wrest
 - (c) might/mite
 - (d) guise/guys
110. Which of the following past tense form is *wrong* ?
- (a) drink – drank
 - (b) bring – brang
 - (c) ring – rang
 - (d) sink – sank
111. Which of the following is a simple sentence ?
- (a) I told the boy to do his homework.
 - (b) I told the boy that he should do his homework.
 - (c) I told the boy, "Do your homework."
 - (d) I told the boy that his homework has to be done.
112. Which of the following is a *wrong* example of degrees of comparison for an adjective ?
- (a) good – better – best
 - (b) bad – worse – worst
 - (c) little – lesser – least
 - (d) much – more – most
113. Which of the following sentences is grammatically *not correct* ?
- (a) He is not bothered about his studies.
 - (b) He is not bothered about studying.
 - (c) He will not bothered about studying.
 - (d) He will not bother about his studies.

114. Which of the following nouns is normally *not used* as a verb ?

- (a) table
- (b) chain
- (c) book
- (d) paper

115. Which of the following is *not* a rhyming pair ?

- (a) fraught/draught
- (b) caught/taught
- (c) brought/fought
- (d) haughty/naughty

116. Which of the following pairs show the *right* antonym ?

- (a) correct - incorrect
- (b) please - displeasure
- (c) perfect - imperfect
- (d) do - redo

117. Which of the following negative sentences is the correct transformation of the sentence ?

"The train left as soon as he reached the station."

- (a) The train did not leave as soon as he reached the station.
- (b) No sooner had the train left than he reached the station.
- (c) The train left as soon as he did not reach the station.
- (d) No sooner had the train left as he reached the station.

118. Which of the following is *not* a synonym of the word 'angry' ?

- (a) anxious
- (b) irate
- (c) livid
- (d) incensed

119. Which of the following sentences is the *correct* transformation into indirect speech of the sentence ?

He told her, "Please bring me a pen."

- (a) He requested her to bring me a pen.
- (b) He requested her to bring him a pen.
- (c) He ordered her to bring him a pen.
- (d) He requested her that bring him a pen.

120. Which of the following is one the least likely to include while writing a paragraph on "The role of engineering in today's world" ?

- (a) The condition of roads in one's locality
- (b) The condition of communications systems
- (c) The condition of your friend after a break up
- (d) The condition of a vehicle after a breakdown