1. HTML is used to create
    (A) machine language program
    (B) high level program
    (C) web page
    (D) web server

2. A computer on internet are identified by
    (A) e-mail address (B) street address
    (C) IP address   (D) none of these

3. Which protocol deals with emails?
    (A) FTP   (B) SMTP
    (C) LPD   (D) X window

4. Which key can be used to view slide show in power point presentation?
    (A) F1   (B) F3
    (C) F5   (D) F7

5. Which Section in the IE act deals with the theft of energy?
    (A) Section 45   (B) Section 43
    (C) Section 40   (D) Section 39

6. The pair of lines $4x^2 + pxy + 9y^2 = 0$ are parallel to each other. Positive value of p is
    (A) 4   (B) 9
    (C) 12   (D) 0

7. If $y = Cos (2x + 3)$, its first order differentlatiation with respect to x is
    (A) $2sin (2x+3)$ (B) $-2sin(2x+3)$
    (C) $2cos(2x+3)$ (D) $-2cos(2x+3)$

8. CAD/CAM is the relationship between
    (A) science and engineering
    (B) manufacturing and marketing
    (C) design and manufacturing
    (D) design and marketing

9. The rated voltage of alternators used in power station is usually
    (A) 440 kV   (B) 220 kV
    (C) 110 kV   (D) 11 kV

10. In a three phase system, the emf's are
    (A) 30 degree apart
    (B) 60 degree apart
    (C) 90 degree apart
    (D) 120 degree apart

11. Motion of particles about their mean position in regular intervats of time is called
    (A) wave   (B) frequency
    (C) gravity   (D) resistance

12. A source of found frequency 600 Hz is placed inside water. The speed of sound in water is 1500 m/s and in air it is 300 m/s. The frequency of sound is recorded by an observer, who is standing in air, is

    (A) 200 Hz   (B) 3000 Hz
    (C) 120 Hz   (D) 600 Hz

13. A sonometer wire vibrates with a frequency n. It is replaced by another wire of three times the diameter. If tension and other parameters remain the same, the frequency of vibration of the wire will be
    (A) 9n   (B) 3n
    (C) n/3   (D) n/9

14. 2 balls are drawn at random with replacement from a box containing 10 black and 8 red balls. Find the probability that both balls are red.
    (A) 8/81   (B) 16/81
    (C) 20/81   (D) 40/81

15. When an object is cut by a section plane parallel to HP and perpendicular to VP, then the sectional view of the object is obtained in
    (A) top view   (B) fron view
    (C) left side view (D) night side view

16. Refractive index of a medium is
    (A) local length to object distance
    (B) speed of light in vacuum to speed of light in air
    (C) speed of light in the medium × speed of light in the air
    (D) speed of light in air to speed of light in vacuum

17. No medium is required for the transfer of heat by the process of
    (A) absorption   (B) conduction
    (C) radiation   (D) convection

18. Most modem wining system for domestic and commercial installation is
    (A) cleat wiring
    (B) wooden batten wiring
    (C) wooden casing wiring
    (D) conduit wiring

19. Vector product of two vectors is also known as
    (A) Scalar product (B) Dot product
    (C) Point product (D) Cross product

20. In triangle PQR length of the side QR is less than twice the length of the side PQ by 2 cm. Length of the side PR exceeds the length of the side PQ by 10 cm. The perimeter is 40 cm. The length of the smallest side of the triangle PQR is
    (A) 6 cms   (B) 8 cms
    (C) 7 cms   (D) 10 cms

21. Electrochemical cells convert
    (A) mechanical energy to electrical energy
    (B) potential energy to electrical energy
    (C) kinetic energy to electrical energy
    (D) chemical energy to electrical energy

22. Condition for two lines to be parallel is their slopes are
    (A) Equal   (B) Perpendicular
    (C) Opposite   (D) None of the above

23. Determinant of $\begin{vmatrix} 2 & 3 \\ 5 & 1 \end{vmatrix}$ is
    (A) 13   (B) −13
    (C) 38   (D) −38

24. Which one of the following is not an ore of Aluminium?
    (A) Bauxite   (B) Corundum
    (C) Epsomite   (D) Cryolite

25. Which solution is used for hydrochlorination of natural rubber with HCl gas?
    (A) benzene
    (B) toluene
    (C) carbon tetrachloride
    (D) acetone

26. Within elastic limit, the ratio of longitudinal stress to longitudinal strain is called as _____ of elasticity
    (A) Bulk's modulus
    (B) Young's modulus
    (C) Modulus of rigidlty
    (D) None of these

27. Unit of viscocity is
    (A) Coulomb
    (B) Newton second per square meter
    (C) Watt per meter per degree celcius
    (D) Joule per kilogram per Kelvin

28. According to _____ if two forces acting simultaneously on a particle, be represented in magnitude and direction by the two sides of a triangle, taken in order; their resultant may be represented in magnitude and direction by the third side of the triangle, taken in opposite order.
    (A) triangle law forces
    (B) polygon law of forces
    (C) rectangle law of forces
    (D) quadrangle law of forces

29. The centre of gravity of an equilateral triangle with each side (a) is _____ from any of the three sides.
    (A) $a\sqrt{3}/2$ (B) $a\sqrt{2}/3$

    (C) $a/2\sqrt{3}$ (D) $a/3\sqrt{2}$

30. The force of friction between two bodies in contact
    (A) Depends upon the area of their contact
    (B) Depends upon the relative velocity between them
    (C) Is always normal to the surface of their contact
    (D) All of the above

31. A voltmeters are used for the measurement of
    (A) current   (B) voltage
    (C) power   (D) energy

32. In a pure capacitive circuit, the current
    (A) lags behind the voltage by 90 degree
    (B) leads the voltage by 90 degree
    (C) remains in phase with voltage
    (D) none of the above

33. The fuse is always connected in _____ of the circuit.
    (A) series   (B) parallel
    (C) neutral   (D) none of these

34. For a 50 Hz transformer, the primary tuns are 100 and maximum flux in core is 0.08 Wb then the primary induced emf is
    (A) 1856 V   (B) 1276 V
    (C) 176 V   (D) 1776 V

35. Cos (A + B) = ?
    (A) Sin A Cos B + Cos A Sin B
    (B) Sin A Cos B − Cos A Sin B
    (C) Cos A Cos B − Sin A Sin B
    (D) Cos A Cos B + Sin A Sin B

36. Rusting of iron occurs due to
    (A) reduction   (B) hydrogenation
    (C) oxidation   (D) sublimation

37. In _____ projection, any view is so placed that it represents the side of the object away from it.
    (A) first angle   (B) second angle
    (C) third angle   (D) fourth angle

38. When a line is contained by a plane, its projection on that plane is
    (A) a point
    (B) equal to its true length
    (C) less than its true length
    (D) more than its true length

39. When the projectors are perpendicular to the plane on which the projection is obtained is known as _____ projection.
    (A) pictorial   (B) isometric
    (C) orthographic   (D) oblique

40. A point 'P' is above Horizontal Plane (HP) and in front of Vertical Plane (VP). The point is in
    (A) First quadrant
    (B) Second quadrant
    (C) Third quadrant
    (D) Fourth quadrant

41. Which type of cable is used for underground service connections?
    (A) Low tension $4\frac{1}{4}$ core cable
    (B) Low tension $3\frac{1}{2}$ core cable
    (C) Low tension $2\frac{1}{4}$ core cable
    (D) Low tension $2\frac{1}{2}$ core cable

42. What type of earthing is used by transmission lines?
    (A) Plate earthing (B) Rod earthing
    (C) Strip earthing (D) Both (A) and (C)

43. The leakage current must not be more than _____ of maximum supply current.
    (A) 1/1000   (B) 1/100
    (C) 1/500   (D) 1/5000

44. _____ connects web pages.
    (A) Link   (B) Hyperlink
    (C) Connector   (D) None of the above

45. URL stands for
    (A) Uniform Resource Locator
    (B) Unique Remote Locator
    (C) Uniform Remote Locator
    (D) Unique Resource Locator

46. If tan $A = \frac{1}{2}$, tan B = $\frac{1}{3}$, value of tan(A+B) is
    (A) 0   (B) 1
    (C) infinity   (D) None of the above

47. Centre of the circle
    $x^2 + y^2 - 6x + 4y + 2 = 0$ is
    (A) (–6, 4)   (B) (6, –4)
    (C) (–3, –2)   (D) (3, –2)

48. If X + Y = $\begin{bmatrix} 6 & 4 \\ 2 & 1 \end{bmatrix}$ and X – Y = $\begin{bmatrix} 2 & 4 \\ 8 & 3 \end{bmatrix}$, value of X is
    (A) $\begin{bmatrix} 2 & 0 \\ -3 & -1 \end{bmatrix}$ (B) $\begin{bmatrix} 2 & 4 \\ 8 & 3 \end{bmatrix}$
    (C) $\begin{bmatrix} 6 & 4 \\ 2 & 1 \end{bmatrix}$ (D) $\begin{bmatrix} 4 & 4 \\ 5 & 2 \end{bmatrix}$

49. When there are no external forces, the shape of a liquid drop is determined by
    (A) Surface tension of the liquid
    (B) Density of liquid
    (C) Viscosity of liquid
    (D) Temperature of air only

50. Pascal's law states that pressure at a point is equal in all directions
    (A) In a liquid at rest
    (B) In a laminar flow
    (C) In a turbulent flow
    (D) In a fluid at rest

51. The ELCB is used to protect the circuit from the
    (A) Burning   (B) Electrical leakage
    (C) Low voltage   (D) Over current

52. The fuse material must have low
    (A) conductivity   (B) permittivity
    (C) meltting point (D) none of these

53. The square root of the veriance is called the _____ deviation.
    (A) Empirical   (B) Mean
    (C) Continuous   (D) Standard

54. If A = $\begin{bmatrix} 2 & -1 \\ 0 & 1 \end{bmatrix}$ characteristic roots of A are
    (A) 1, –1   (B) 0, 1
    (C) 0, –1   (D) 1, 2

55. The velocity ratio of a first system of pulleys with 4 pulleys is
    (A) 4   (B) 8
    (C) 16   (D) 15

56. If the resultant of two forces P and Q acting at an angle (α) with P then
    (A) tan α = P sin θ/(P + Q cos θ)
    (B) tan α = P cos θ/(P + Q cos θ)
    (C) tan α = Q sin θ/(P + Q cos θ)
    (D) tan α = Q cos θ/(P + Q cos θ)

57. The Newton's Second Law of Motion gives a relation between force, mass and
    (A) velocity   (B) acceleration
    (C) speed   (D) none of these

58. $(1.01)^5 =$
    (A) 1.001   (B) 1.051
    (C) 1.51   (D) 15.1

59. Polar form of a complex number is
    (A) r (tan θ + i cot θ)
    (B) r (sec θ + i cosec θ)
    (C) r (cos θ + i sin θ)
    (D) r (sin θ + i cos θ)

60. In a right angle triangle ABC right angled at B, AB = 10 cms, A = 22° values of AC and BC are
    (A) 3.75, 9.27   (B) 4.23, 8.45
    (C) 1.87, 6.52   (D) 9.68, 4.15

61. MS Office 2000 included a full fledged web designing software called
    (A) MS Word
    (B) Front Page 2000
    (C) Outlook express
    (D) Front page express

62. Excel uniquely identifies cells within a worksheet with a cell name by
    (A) Cell names
    (B) Coumn numbers and row letters
    (C) Column letters and row numbers
    (D) Cell locator corrdinates

63. A motor of 1 mechanical horsepower drives _____ watts.
    (A) 746   (B) 467
    (C) 674   (D) 647

64. Which lamp is used in the outdoor illumination of buildings and airport runway?
    (A) Gaseous discharge lamp
    (B) Halogen lamp
    (C) Sodium vapour lamp
    (D) All of these

65. In a 3 phase balanced star connected load, neutral current is equal to
    (A) zero   (B) phase current
    (C) line current (D) unpredictable

66. Electrolyte among following is
    (A) NaOH   (B) urea
    (C) glucose   (D) berizene

67. According to Ohm's law R is equal to
    (A) V_2/R (B) I/R
    (C) VI (D) V/I

68. $\sin 480° = ?$
    (A) 0   (B) 0.5
    (C) 0.86   (D) 1

69. Selection of 11 cricket players out of 17 players can be done in _____ ways.
    (A) $^{17}C_6$ (B) $^{17}P_6$
    (C) $^{17}P_{11}$ (D) None of the above

70. The resistance is _____ proportional to length and _____ proportional to area of cross-section
    (A) directly, directly
    (B) directly, inversly
    (C) inversly, directly
    (D) none of these

71. Mathematical expression that describes Boyle's law is
    (A) PV = constant   (B) V* constant = P
    (C) P* constant = V   (D) V/P = constant

72. As we move across periodic table from left to right, reactivity of metals with oxygen
    (A) decreases   (B) increases
    (C) remains same (D) zero

73. In magnetic separation, magnets are used to separate
    (A) mineral and gangue
    (B) metal and mineral
    (C) metal and ganuge
    (D) iron and steel

74. The Isometric axis are inclined at _____ degree to each other
    (A) 60   (B) 90
    (C) 120   (D) 150

75. 'Representative Fraction* (RF) is defined as
    (A) Length of an object in the drawing/ Actual length of the object
    (B) Length of an object in the drawing/ Isometric length of the object
    (C) Actual length of the object/Length of an object in the drawing
    (D) Isometric length of the object/Length of an object in teh drawing

76. According to Lami's theorem, if three coplanar forces acting at a point be in equilibrium, then each force is proportional to the _____ of the angle between the other two.
    (A) sine   (B) cosine
    (C) tan   (D) sec

77. If efficiency of a lifting machine is kept constant, its velocity ratio is directly proportional to its
    (A) effort applied
    (B) mechanical advantage
    (C) machine friction
    (D) all of the above

78. The side view of an object is drawn in
    (A) Vertical plane
    (B) Horizontal plane
    (C) Profile plane
    (D) None of the above

79. The top view of a right cylinder resting on HP on its base rim is
    (A) Ellipse   (B) Rectangle
    (C) Square   (D) Circle

80. π radians =
    (A) 360°   (B) 270°
    (C) 180°   (D) 90°

81. Blister copper is
    (A) Pure copper   (B) Ore of copper
    (C) Alloy of copper (D) Impure copper

82. _____ polymers soften when heated and can be reshaped when hot.
    (A) thermosoftening
    (B) thermosetting
    (C) both the above
    (D) none

83. Which tree gives out latex to obtain nautral rubber?
    (A) eucalyptus
    (B) hevea brassiliensis
    (C) anogeissus
    (D) astragalus

84. N^{th} derivative of e^{ax} is
    (A) e^{ax}
    (B) na^x
    (C) e^{nx}
    (D) $a^n e^{ax}$

85. The linear velocity of a rotating body is given by the relation _____ where r = Radius of the circular path, and ω = Angular velocity of the body in radian/s.
    (A) $v = r.\omega$
    (B) $v = r/\omega$
    (C) $v = \omega/r$
    (D) $2\omega/r$

86. According to Pauli's exclusion principle, it is impossible for any two electrons in a given atom to have all the _____ quantum numbers identical.
    (A) 1
    (B) 2
    (C) 3
    (D) 4

87. Total number of orbitals assoclates with the principal quantum number n = 3 is
    (A) 9
    (B) 8
    (C) 7
    (D) 6

88. According to _____ in the ground state of the atoms, the orbitals are filled in order of their increasing energies.
    (A) Expulsion principle
    (B) Aufbau principle
    (C) Duplet rule
    (D) None of the bove

89. An electrolytic cell uses electrical energy to drive
    (A) chemical reaction
    (B) physical reaction
    (C) no reaction
    (D) none of the above

90. Lead and Zinc metals occur naturally as
    (A) oxides
    (B) sulphite ores
    (C) carbon ores
    (D) chloride ores

91. A region around the magnet in which magnetic influence can be experienced is called
    (A) flux
    (B) line of force
    (C) strength
    (D) magnetic field

92. In a series circuit, _____ remains same.
    (A) current
    (B) voltage
    (C) resistance
    (D) none of the above

93. The rotating part of dc machine is called
    (A) field
    (B) armature
    (C) frame
    (D) yoke

94. The internal force developed in body, in order to regain its original size and shape after application of deforming force is
    (A) restoring force
    (B) elastic force
    (C) stress
    (D) strain

95. A cylindrical bar of length 0.2 m deforms to 2 mm. What will be the strain developed in the bar?
    (A) 1
    (B) 0.1
    (C) 0.01
    (D) 0.001

96. If a ladder is not in equllibrium against a smooth vertical wall, then it can be made in equilibrium by
    (A) Increasing the angle of inclination
    (B) Decreasing the angle of inclination
    (C) Increasing the length of the ladder
    (D) Decreasing the length of the ladder

97. A _____ can copy a printed page of text or a graphic into the computer's memory, freeing us from creating the data from scratch.
    (A) printer
    (B) plotter
    (C) painter
    (D) scanner

98. The software used for tasks such as managing disks and trouble shooting hardware problems is
    (A) Utility
    (B) Application software
    (C) Opeating system
    (D) None of the above

99. The common keyboard arrangement is called _____ layout.
    (A) QWERTY
    (B) QERWTY
    (C) QREWTY
    (D) QWTERY

100. Which of the following operating system do you choose to implement a client server network?
    (A) MS DOS
    (B) Windows 86
    (C) Windows 98
    (D) Windows 2000

Answer-key & Solution

JE DSSSB
ME & EE

1. C	16. B	31. B	46. B	61. B	76. A	91. D
2. C	17. C	32. B	47. D	62. C	77. B	92. A
3. B	18. D	33. A	48. D	63. A	78. C	93. B
4. C	19. D	34. D	49. A	64. B	79. D	94. B
5. D	20. B	35. C	50. D	65. A	80. C	95. C
6. C	21. D	36. C	51. B	66. A	81. D	96. A
7. B	22. A	37. A	52. C	67. D	82. A	97. D
8. C	23. B	38. B	53. D	68. C	83. B	98. A
9. D	24. C	39. C	54. D	69. D	84. D	99. A
10. D	25. A	40. A	55. C	70. B	85. A	100. D
11. B	26. B	41. A	56. C	71. A	86. D	
12. D	27. B	42. D	57. B	72. A	87. A	
13. C	28. A	43. D	58. B	73. D	88. B	
14. B	29. C	44. B	59. C	74. C	89. A	
15. A	30. B	45. A	60. D	75. A	90. B	

Note : *If your opinion differ regarding any answer, please message the mock test and Question number to 9560620353*

Note : *If you face any problem regarding result or marks scored, please contact : 9313111777*

6.(C) $ax^2 + 2hxy + by^2 = 0$

$$4x^2 + 2\left(\frac{P}{2}\right)xy + 9y^2 = 0$$

Condition for parallel lines

$$\left(\frac{P}{2}\right)^2 = 4 \times 9$$

$P/2 = 6$

$P = 12$

7.(B) $y = \cos(2x + 3)$

$$\frac{dy}{dx} = \frac{d}{dx}[\cos(2x + 3)]$$

$$= \frac{d\cos(2x + 3)}{d(2x + 3)}\frac{d(2x + 3)}{dx}$$

$= -\sin(2x + 3) \, 2$

$$\frac{dy}{dx} = -2\sin(2x + 3)$$

14.(B) $n(S) = {}^{18}C_1 \cdot {}^{18}C_1$

$n(E) = {}^{8}C_1 \cdot {}^{8}C_1$

$$P(E) = \frac{n(E)}{n(S)}$$

$$= \frac{{}^{8}C_1 \cdot {}^{8}C_1}{{}^{18}C_1 \cdot {}^{18}C_1}$$

$$P(E) = \frac{16}{81}$$

13.(C) $n = \frac{1}{2l}\sqrt{\frac{T}{m}}$

$n \propto \frac{1}{\sqrt{m}}$

$$\propto \frac{1}{\sqrt{\rho \frac{\pi}{4} d^2}}$$

$n \propto \frac{1}{d}$

$$\frac{n_1}{n} = \frac{d}{d_1}$$

$$\frac{n_1}{n} = \frac{1}{3}$$

$$n_1 = \frac{n}{3}$$

20.(B)
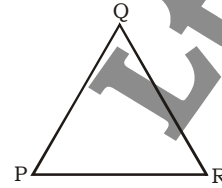
QR = 2PQ − 2

PR = PQ + 10

PQ + QR + PR = 40

PQ + 2PQ − 2 + PQ + 10 = 40

4 PQ = 32
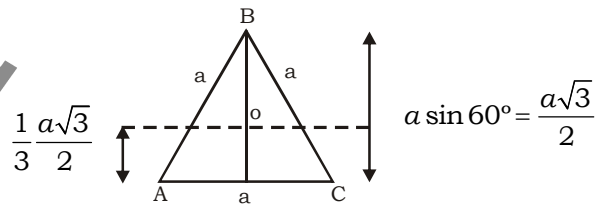
PQ = 8

QR = 14

PR = 18

29.(C)

$$BD = \frac{a\sqrt{3}}{2}$$

$$OD = \frac{1}{3}\frac{a\sqrt{3}}{2}$$

$$OD = \frac{a}{2\sqrt{3}}$$

34.(D) $E_1 = 4.44 \, N \times f \, \phi_m$

$\qquad = 4.44 \times 100 \times 50 \times 0.08$

$\qquad = 444 \times 4 = 1776$ Volt

46.(B) $\tan A = \frac{1}{2}, \tan B = \frac{1}{3}$

$$\tan(A + B) = \frac{\tan A + \tan B}{1 - (\tan A)(\tan B)}$$

$$= \frac{1/2+1/3}{1-1/2\times1/3}$$

$$= \frac{5/6}{1-1/6} = \frac{5/6}{5/6}$$

$$\tan(A+B) = \perp$$

47.(D) Equation of circle $x^2 + y^2 - 2gx - 2fy + c^2 = 0$

Centre = (g, f)

Compairing the equation.

$x^2 + y^2 - 6x + 4y + 2 = 0$

$x^2 + y^2 - 2(3)x - 2(-2)y + 2 = 0$

(g, f) = (3, - 2)

48.(D) $x + y = \begin{bmatrix} 6 & 7 \\ 2 & 1 \end{bmatrix}$ ...(i)

$x - y = \begin{bmatrix} 2 & 4 \\ 8 & 3 \end{bmatrix}$ ...(ii)

equation (i) + equation (ii)

$(x + y) + (x - y) = \begin{bmatrix} 6 & 4 \\ 2 & 1 \end{bmatrix} + \begin{bmatrix} 2 & 4 \\ 8 & 3 \end{bmatrix}$

$2x = \begin{bmatrix} 8 & 8 \\ 10 & 4 \end{bmatrix}$

$x = \begin{bmatrix} 4 & 4 \\ 5 & 2 \end{bmatrix}$

53.(D) Variance

= (standard daviation)^2

= σ^2

$\sigma = \sqrt{\text{variance}}$

54.(D) $A = \begin{bmatrix} 2 & -1 \\ 0 & 1 \end{bmatrix}$

lets roots are λ_1 and λ_2

$\lambda_1 \times \lambda_2 = \begin{vmatrix} 2 & -1 \\ 0 & 1 \end{vmatrix} = 2 - 0 = 2$ ...(i)

$\lambda_1 (3 - \lambda_1) = 2$

$\lambda_1^2 - 3\lambda_1 + 2 = 0$

$\lambda_1^2 - 2\lambda_1 - \lambda_1 + 2 = 0$

$\lambda_1(\lambda_1 - 2) - 1(\lambda_1 - 2) = 0$

$(\lambda_1 - 2)(\lambda_1 - 1) = 0$

$\lambda_1 = 2, \lambda_1 = 0$

$\lambda_2 = 1, \lambda_2 = 2$

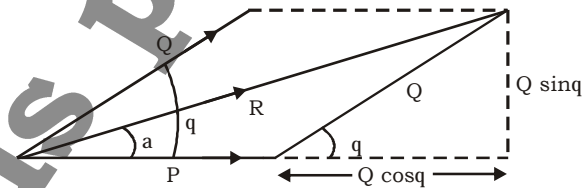**55.(C)** A first system of pulley with 4 pulleys.

If all 4 pulleys are movable —

	Ist	2nd	3rd	4th	Pulley
V →	2V	4V	8V	16V	O

$$\text{Velocity ratio} = \frac{\text{Velocity of last pulley}}{\text{Velocity of first pulley}}$$

$$= \frac{16V}{V}$$

V.R = 16

56.(C)

$$\tan\alpha = \frac{Q\sin\theta}{(P + Q\cos\theta)}$$

58.(B) $(1.01)^5 = (1 + 0.01)^5$

$0.01 << 1$

So $(1 + 0.01)^5 = 1 + 5 \times 0.01 = 1.05.$

$(1.01)^5 = 1.05$

59.(C) Z = x + i.y

In polar form

x = r cos θ and y = r sin θ

so z = r (cos θ + i sin θ)

60.(D) AB = 10cm

∠BAC = 22°

$\tan 22° = \dfrac{BC}{AB}$

BC = 4.04 cm

$\cos 22° = \dfrac{AB}{AC}$

AC = 10.78 cm
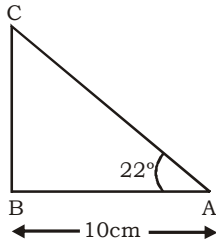
167.(D) Ohm's law

V = IR

R = V/I

168.(C) Sin (480)° = Sin (360 + 120)°

Sin (360 + 120)° = Sin 120°

and Sin 120° = Sin (90 + 30)°

Sin (90+30)° = Cos 30°

Finally Sin 480 = Cos 30 = $\dfrac{\sqrt{3}}{2}$

Sin 480° =0.866

69.(D) Selection of 11 players from 17 players = $17C_{11}$

70.(B) R = $\dfrac{\rho.l}{A}$

$R \propto \lambda$

$R \propto \dfrac{1}{A}$

84.(D) $y = e^{ax}$

$\dfrac{dy}{dx} = ae^{ax}$

$\dfrac{d^2y}{dx^2} = a^2 e^{ax}$

So $\dfrac{d^n y}{dx^n} = a^n e^{ax}$

87.(A) Numbers of orbitals $= n^2$

$= 3^2$

Numbers of orbitals

95.(C) $L_o = 0.2$ m = 200 mm

$\delta = 2$mm

$\varepsilon = \dfrac{\delta}{L} = \dfrac{2}{200}$

$\varepsilon = 0.01$