34/2014

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. $0.01 \times 0.01 =$

   (A) 0.001 (B) 0.0001

   (C) 0.1 (D) 0.0101

2. 32°F =

   (A) 32°C (B) 100°C

   (C) –32°C (D) 0°C

3. 0.5 kg =

   (A) 5 grams (B) 50 grams

   (C) 500 grams (D) 5000 grams

4. When measurements are required in three units ———— scale is used.

   (A) diagonal (B) plain

   (C) comparative (D) none of these

5. 735.5 watts =

   (A) 550 kg metre/second (B) 750 kg metre/second

   (C) 75 kg metre/second (D) 7.5 kg metre/second

6. 200 cm =

   (A) 0.2 metre (B) 0.02 metre

   (C) 0.002 metre (D) 2 metre

7. Unit for stress in S.I. system is :

   (A) kg/cm^2 (B) gm/mm^2

   (C) $Newton/m^2$ (D) $Newton/cm^2$

8. 1 kWh is equal to :

   (A) 4.2 mega joules (B) 33000 joules

   (C) 0.42 kilo joules (D) 3.6 mega joules

9. T-square is used for drawing ———— lines.
   (A) vertical (B) curved
   (C) horizontal (D) oblique

10. 25.4 cm is equal to :
   (A) 10 inches (B) 0.01 inch
   (C) 1 inch (D) 2.54 inches

11. 1 ton =
   (A) 100 kg (B) 1016 kg
   (C) 1000 kg (D) 980 kg

12. L.C.M. of 3,4 and 5 is :
   (A) 3 (B) 4
   (C) 5 (D) 60

13. The angle which is more than 180° and less than 360° is called :
   (A) Reflex angle (B) Acute angle
   (C) Straight angle (D) Obtuse angle

14. 1 kilometre is equal to :
   (A) 0.622 mile (B) 0.633 mile
   (C) 0.602 mile (D) 0.666 mile

15. ———— is used for setting-off short equal distance.
   (A) Compass (B) Bow divider
   (C) Scale (D) None of these

16. $2\frac{1}{2} \times 3\frac{1}{2}$ is equal to :
   (A) 0.5 (B) 7.75
   (C) 8.75 (D) 35

17. Which formula is used to calculate the diagonal of a rectangle when 'l' and 'b' are the length and breadth of the rectangle?
   (A) $d = \sqrt{l^2 + b^2}$ (B) $\sqrt{l^2 - b^2}$
   (C) $d = \sqrt{lb}$ (D) $\sqrt{l^2 \cdot b^2}$

18. To remove unnecessary lines ———— is used.

(A) duster (B) chalk

(C) sand paper (D) eraser

19. As far as possible dimensions should be given in one unit, preferably in :

(A) centimetres (B) metres

(C) inches (D) millimetres

20. 1 gallon equals to :

(A) 4.1 litres (B) 4.24 litres

(C) 4.50 litres (D) 4.54 litres

21. State which of the following are in proportion :

(A) 6 : 8 : : 5 : 15 (B) 3 : 7.5 : : 2 : 7

(C) 10 : 21 : : 4 : 8.4 (D) 7 : 10 : : 14 : 18

22. In which quadrant the units 3, –7 will be plotted?

(A) I quadrant (B) II quadrant

(C) III quadrant (D) IV quadrant

23. The value of $\sin^2 30 + \cos^2 30$ equals to :

(A) 0 (B) 1

(C) 0.5 (D) 1800

24. Which one is the improper fraction?

(A) $\frac{2}{3}$ (B) $\frac{9}{5}$

(C) $\frac{2/3}{4}$ (D) $5\frac{5}{6}$

25. Which one refers to temperature?

(A) It is a form of energy (B) It tells the state of heat

(C) Unit is calorie (D) It is measured by calorimeter

26. The value of $4^{\frac{3}{2}}$ is :

(A) 2 (B) 6

(C) 8 (D) 4096

27. Drawings of buildings are drawn using :

(A) full-size scale
(B) reduced scale
(C) scale of chords
(D) enlarged scale

28. If $\cos\theta = \frac{4}{5}$, $\sin\theta =$

(A) $\frac{3}{5}$
(B) $\frac{4}{5}$
(C) $\frac{5}{4}$
(D) $\sqrt{3}$

29. The H.C.F. of 66 and 330 is :

(A) 66
(B) 330
(C) 24
(D) 3

30. Lateral surface area of a cone is :

(A) $\pi r l$
(B) $\frac{1}{3}\pi r l$
(C) $\frac{1}{4}\pi r^2 h$
(D) $\frac{1}{3}\pi r^2 h$

31. $\text{Log}\left(\frac{a}{b}\right) =$

(A) $\text{Log } a + \text{Log } b$
(B) $\text{Log } a - \text{Log } b$
(C) $\text{Log } (a+b)$
(D) $\text{Log } ab$

32. The bigger fraction is :

(A) $\frac{5}{6}$
(B) $\frac{5}{12}$
(C) $\frac{5}{7}$
(D) $\frac{5}{18}$

33. What is the volume 'V' (in cm^3) of the container which can hold 6.28 litres of water at 4°C?

(A) $V = 6.28\ cm^3$
(B) $V = 62.8\ cm^3$
(C) $V = 628\ cm^3$
(D) $V = 6280\ cm^3$

34. The value of $\tan 45^\circ + \cot 45^\circ =$

(A) $\sqrt{3}$ (B) $\frac{1}{2}$

(C) 2 (D) $2\sqrt{2}$

35. Kinetic energy K.E. =

(A) mV^2 (B) $\frac{1}{2}mV^2$

(C) mV (D) mgh

36. Decimal of 62% is :

(A) 0.31 (B) 1.62

(C) 0.62 (D) 2.62

37. A body travels a distance of 20 metres in 10 seconds. What is its speed?

(A) 1 metre/second (B) 2 metres/second

(C) 3 metres/second (D) 200 metres/second

38. Perimeter of the rectangle with length 'l' and breadth 'b' is :

(A) $3(l+b)$ (B) $4(l+b)$

(C) $2(l+b)$ (D) $2lb$

39. The sum of interior angles of a pentagon is :

(A) 500° (B) 600°

(C) 540° (D) 450°

40. Which number is exactly divisible by 3?

(A) 10 (B) 22

(C) 95 (D) 72

41. The value of $6 \div 3 \div 2$ is :

(A) 1 (B) 2

(C) 3 (D) 4

42. The unit of work is :

(A) kg/cm^2 (B) Newton

(C) kg/cm (D) kg-cm

43. Pythagoras theorem applies to :

(A) Square
(B) Right angled triangle
(C) Equilateral triangle
(D) Isosceles triangle.

44. According to Newton :

(A) Force = Mass × Acceleration
(B) Force = Mass × Velocity
(C) Force = Velocity × Time
(D) Force = Mass × Speed

45. If a number is multiple of 2 is called :

(A) Odd number
(B) Mixed number
(C) Even number
(D) Prime number

46. Density has relation between :

(A) mass and volume
(B) volume and temperature
(C) temperature and pressure
(D) mass and velocity

47. Proper fraction is :

(A) less than 1
(B) equal to 1
(C) more than 1
(D) zero

48. The formula used for solving quadratic equation is :

(A) $x = \frac{b \pm \sqrt{b^2 - 4ac}}{2a}$
(B) $x = -b \pm \sqrt{\frac{b^2 - 4ac}{2a}}$
(C) $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
(D) $x = -b \pm \frac{\sqrt{b^2 - 4ac}}{2a}$

49. $\frac{\text{Force}}{\text{Area}} =$

(A) Elasticity
(B) Load
(C) Stress
(D) Strain

50. In a motor, electric energy is transformed into :

(A) Light energy
(B) Sound energy
(C) Vibrational energy
(D) Mechanical energy

51. Centigrade and Fahrenheit scale reading remains same at ———— temperature.

(A) +40° (B) 0°

(C) +32° (D) –40°

52. The factor of safety for any design work should be :

(A) more than 1 (B) equal to 1

(C) less than 1 (D) zero

53. In a plane, the maximum angle around a point is :

(A) π radian (B) 2π radian

(C) 3π radian (D) $\frac{\pi}{2}$ radian

54. Electrical power is measured in :

(A) Kilowatt hour (B) Watt

(C) Newton (D) Newton-metre

55. In first angle projection method, the plan drawn at :

(A) above the elevation (B) right side of elevation

(C) below the elevation (D) left side of elevation

56. The rate of change of velocity is :

(A) Momentum (B) Speed

(C) Acceleration (D) Inertia

57. Which is the odd one of the following?

(A) Vernier scale (B) Scale of chords

(C) Plain scale (D) Diagonal scale

58. $\frac{1}{2}+\frac{1}{2}-\frac{1}{2}\times\frac{1}{2}=$

(A) 0 (B) $\frac{1}{2}$

(C) 1 (D) $\frac{3}{4}$

59. Density is :

(A) $\frac{\text{Mass}}{\text{Volume}}$ (B) $\frac{\text{Volume}}{\text{Mass}}$

(C) $\frac{\text{Weight}}{\text{Volume}}$ (D) Mass × Volume

60. $(a+b)(a+b) =$

(A) $a^2 - b^2$ (B) $a^2 + b^2 + 2ab$

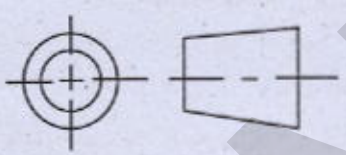
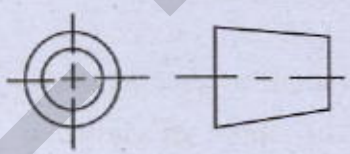
(C) $a^2 - 2ab + b^2$ (D) $a^2 + 2ab - b^2$

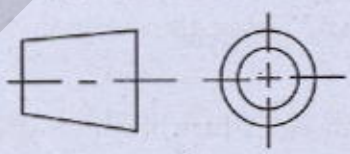
61. $2^{0-2} =$

(A) 1 (B) 4

(C) $\frac{1}{2}$ (D) $\frac{1}{4}$

62. The symbol for Third Angle projection is :

(A)  (B) 

(C)  (D) 

63. The product of two even numbers will be an _____ number.

(A) Odd number (B) Even number

(C) Prime number (D) Proper fraction

64. Stress is the ratio of :

(A) $\frac{\text{Load}}{\text{Area}}$ (B) $\frac{\text{Area}}{\text{Load}}$

(C) $\frac{\text{Load}}{\text{Original Length}}$ (D) $\frac{\text{Increase in Length}}{\text{Original Length}}$

65. Which one of the following is a vector quantity?

(A) Speed (B) Mass

(C) Force (D) Specific gravity

66. $\sqrt{\frac{16}{4}} =$

(A) 8 (B) 2
(C) 4 (D) 1

67. The density of iron is 7.85 times the density of water at 4°C. Then the specific gravity of iron is :

(A) 7.85 (B) 7.85 gm/cm^3
(C) 981 (D) 981 gm/cm^3

68. $(100-1)(100+1) =$

(A) 10099 (B) 9999
(C) 9901 (D) 9900

69. The isometric drawing of a circle is :

(A) Circle itself (B) Hyperbola
(C) Parabola (D) Ellipse

70. The surface area of a sphere is 36π cm^2, then the volume of the sphere is :

(A) 12π cm^3 (B) 18π cm^3
(C) 72π cm^3 (D) 36π cm^3

71. The mass of 1 litre of water at 4°C is :

(A) 10 gram (B) 100 gram
(C) 1000 gram (D) 500 gram

72. _____ is the most malleable of all metals.

(A) Platinum (B) Copper
(C) Silver (D) Gold

73. Heat is produced by :

(A) Temperature (B) Energy
(C) Momentum (D) Friction

74. Which one of the following is an example for Third Order Lever?

(A) Wheel barrow (B) Nut cracker
(C) Scissors (D) Fore arm

75. 1 micron is :

(A) 1 mm
(B) 0.001 mm
(C) 0.01 mm
(D) 0.1 mm

76. Heat is produced by :

(A) Temperature
(B) Energy
(C) Momentum
(D) Friction

77. The included angle between any two sides of an equilateral triangle is :

(A) 90°
(B) 60°
(C) 45°
(D) 30°

78. Mass is defined as the quantity of :

(A) Atoms
(B) Molecules
(C) Matter
(D) Electrons

79. The melting point of ice is :

(A) 0°C
(B) 100°C
(C) 4°C
(D) 1°C

80. $\frac{\text{Output}}{\text{Input}} =$

(A) Torque
(B) Work
(C) Efficiency
(D) None of these

81. Khe Khyber Pass exist in the North Western ranges of the Himalayas connects the following places :

(A) India and Afghanistan
(B) Peshawar with Kabul
(C) India with Kabul
(D) Manipur with Chindwin

82. Who among the following was elected as the Chairman of the drafting committee of Indian Constitution?

(A) Dr. Rajendra Prasad
(B) Dr. B.N. Ravi
(C) Dr. Sachidananda Sinha
(D) Dr. B.R. Ambedkar

83. The Planning Commission of India was set up in :

(A) 1950
(B) 1951
(C) 1948
(D) 1964

84. Who among the following founded The Servants of Indian Society?

(A) Gopalakrishna Gokhale (B) Balagangadhar Tilak
(C) Annie Beasant (D) Vinobha bhave

85. Which was the first rocket launched from the Vikram Sarabhai Space Centre, Tumba on 21 November 1963?

(A) RH 100 (B) Arkas
(C) Appache (D) Judi Arc

86. Who among the following cricketer scored six sixes in an over in the first class cricket?

(A) Javed Miyandad (B) Michael Hobbes
(C) Garry Sobers (D) Alen Border

87. Which of the following rivers rises in the eastern base of the Kailas mountain and flows in Assam?

(A) Ganges (B) Narmada
(C) Cauvery (D) Brahmaputhra

88. The Progressive Party leader elected as the president of the Maldives on 17th Nov. 2013 :

(A) Abdul Gayoob (B) Abdulla Emin
(C) Abdul Nasheed (D) Navas Sherif

89. Who among the following was born in 14th Nov. 1889?

(A) Mohandas Karamchand Gandhi (B) Lala Lajpat Rai
(C) Jawaharlal Nehru (D) Bala Gangadhar Tilak

90. The Indian Scientist who received Bharat Ratna with Sachin Tendulkar in Nov. 2013 :

(A) Prof. C.N.R. Rao (B) Bhimsen Joshi
(C) Lata Mangeshkar (D) Ustad Bismillah Khan

91. Who among the following wrote the famous Malayalam novel "Ninamaninha Kalpadukal"?

(A) Uroob P.C. Kuttikrishnan (B) M.T. Vasudevan Nair
(C) Thakazhi Sivasankara Pillai (D) Parappuram K.E. Mathai

92. The social reformer of Kerala who started the journal "Swadeshabhimani" in 1905 to create an awareness against feudal autocracy in the state :

(A) Sree Narayana Guru (B) Vakkam Abdul Khader Moulavi
(C) V.T. Bhattathiripad (D) Ayyankali

93. The external affairs minister of India who addressed the UN Assembly in Hindi in 1977 :

(A) Charan Singh
(B) Indira Gandhi
(C) A.B. Vajpayee
(D) Jayaprakash Narayan

94. The autobiographical work "Long Walk to Freedom" is written by :

(A) Mahatma Gandhi
(B) Nelson Mandela
(C) Martin Luther King
(D) Zulficar Ali Bhutto

95. Who will acts as the President of India in the absence of both the President and Vice President?

(A) The Chief Justice of India
(B) The Attorney General
(C) The Speaker of Lok Sabha
(D) The Defence Minister

96. Which of the following social reformer of Kerala founded the Sadhu Jana Samajam?

(A) Mannathu Padmanabhan
(B) Pandit Karuppan
(C) Vagbhatanantha
(D) Ayyankali

97. Which cities of the following is the headquarters of World Health Organisation (WHO)?

(A) Paris
(B) Washington DC
(C) Geneva
(D) London

98. Which of the following chemical is known as "laughing gas"?

(A) Nitrogen peroxide
(B) Nitrous oxide
(C) Aniline
(D) Magnesium sulphate

99. Which among the following is the organisation set up in 1995 as the successor of GATT?

(A) UNICEF
(B) WTO
(C) IAEA
(D) FAO

100. Which of the following works is not written by Kumaranasan?

(A) Bashpanjali
(B) Nalini
(C) Manimala
(D) Pushpavadi
