

**PART - II**  
**(GENERAL STUDIES)**

31. Highest Mountain peak of India is known as  
(A) Everest  
(B) K-2  
(C) Kanchenjunga  
(D) More than one of the above  
(E) None of the above
32. Indian continent was earlier part of  
(A) Gondwanaland  
(B) Pangea  
(C) Tethys  
(D) More than one of the above  
(E) None of the above
33. Who led the Revolt of 1857 in Bihar?  
(A) Tatya Tope  
(B) Nana Saheb  
(C) Kunwar Singh  
(D) More than one of the above  
(E) None of the above
34. The spiritual side of nationalism was voiced by  
(A) Raja Ram Mohan Roy  
(B) Swami Vivekananda  
(C) Swami Shraddhanand  
(D) More than one of the above  
(E) None of the above
35. Which newspaper propagated strong nationalist views during India's freedom struggle?  
(A) Pioneer  
(B) Statesman  
(C) Amrit Bazar Patrika  
(D) More than one of the above  
(E) None of the above
36. Who intervened in a dispute between the workers and mill owners of Ahmedabad in 1918?  
(A) Vallabhbhai Patel  
(B) Jamshedji Tata  
(C) Mahatma Gandhi  
(D) More than one of the above  
(E) None of the above
37. Name the left-wing leader of Bihar Provincial Kisan Sabha who popularised this in Bihar?  
(A) Karyanand Sharma  
(B) P.C. Joshi  
(C) Wadhwa Ram  
(D) More than one of the above  
(E) None of the above
38. Muddiman Committee was appointed to report on the working of the  
(A) Dyarchy  
(B) Federalism  
(C) Communal representation  
(D) More than one of the above  
(E) None of the above
39. "He was a great unifier in India who taught us not only bare tolerance of others but the willing acceptance of them as our friends and comrades in common undertakings" who said it?  
(A) Subhash Chandra Bose  
(B) Rajendra Prasad  
(C) Balgangadhar Tilak  
(D) More than one of the above  
(E) None of the above
40. Who proceeded to organise the Provisional Government of Free India outside the country?  
(A) Raja Mahendra Pratap  
(B) Subhash Chandra Bose  
(C) Rash Behari Bose  
(D) More than one of the above  
(E) None of the above



41. A player makes 7 complete revolutions of a circular path to complete a race of 2200 metres. The radius of the circular path is :

$$\left(\pi = \frac{22}{7}\right)$$

- (A) 42 metres
  - (B) 50 metres
  - (C) 45 metres
  - (D) More than one of the above
  - (E) None of the above
42. If the capacity of a cylindrical tank is  $1848 \text{ m}^3$  and the diameter of its base is 14 m, the depth of the tank is :  $\left(\pi = \frac{22}{7}\right)$
- (A) 8 m
  - (B) 16 m
  - (C) 12 m
  - (D) More than one of the above
  - (E) None of the above
43. If  $\frac{1}{8}$ th of a number is 30, what will be 62% of that number?
- (A) 181.3
  - (B) 148.8
  - (C) 178.24
  - (D) More than one of the above
  - (E) None of the above
44. The salary of an officer is increased by 25%. By what percent should the new salary be decreased to restore the original salary?
- (A) 25
  - (B) 20
  - (C) 22.5
  - (D) More than one of the above
  - (E) None of the above

45. By what number should  $\left(-\frac{2}{3}\right)^{-3}$  be divided

so that the quotient is  $\left(\frac{4}{9}\right)^{-2}$  ?

- (A)  $\frac{2}{3}$
  - (B)  $-\frac{3}{2}$
  - (C)  $-\frac{2}{3}$
  - (D) More than one of the above
  - (E) None of the above
46. If  $x + \frac{1}{x} = 5$ , what is the value of  $x^4 + \frac{1}{x^4}$  ?
- (A) 525
  - (B) 529
  - (C) 527
  - (D) More than one of the above
  - (E) None of the above
47. A bag contains 5-rupee, 2-rupee and 1-rupee coins in the ratio 2 : 3 : 4. The total value of all the coins is ₹2,000. How many coins of 2-rupee are there in the bag?
- (A) 200
  - (B) 400
  - (C) 250
  - (D) More than one of the above
  - (E) None of the above
48. The interior angle of a regular polygon exceeds its exterior angle by  $108^\circ$ . How many sides does the polygon have?
- (A) 10
  - (B) 8
  - (C) 9
  - (D) More than one of the above
  - (E) None of the above





49. Zinc Oxide is normally used in the manufacture of  
 (A) Paints  
 (B) Solvents  
 (C) Explosives  
 (D) More than one of the above  
 (E) None of the above
50. Lenz's law is derived from the law of conservation of  
 (A) Magnetism  
 (B) Charge  
 (C) Momentum  
 (D) More than one of the above  
 (E) None of the above
51. Glycogen stored in liver and muscles of human body is in form of  
 (A) Monosaccharide  
 (B) Protein  
 (C) Polysaccharide  
 (D) More than one of the above  
 (E) None of the above
52. In which of the following blood has defective haemoglobin?  
 (A) Haematoma  
 (B) Haemophilia  
 (C) Sickle cell Anaemia  
 (D) More than one of the above  
 (E) None of the above
53. In which of the following medicine production, ethyl alcohol can be used?  
 (A) Antiseptic  
 (B) Anti-allergic  
 (C) Antipyretic  
 (D) More than one of the above  
 (E) None of the above
54. Velocity of sound at  $15^{\circ}\text{C}$  and 380mm pressure is  $340\text{m. sec}^{-1}$ . If the pressure is doubled without change of temperature, the velocity of sound would become  
 (A)  $680\text{m. sec}^{-1}$   
 (B)  $190\text{m. sec}$   
 (C)  $170\text{m. sec}^{-1}$   
 (D)  $340\text{m. sec}^{-1}$   
 (E) None of the above
55. If a bacterium cell divides in every 15 min, how many bacteria will be formed in 2 hours.  
 (A) 8  
 (B) 64  
 (C) 16  
 (D) 256  
 (E) None of the above
56. Plants and animal cell differ in which of the following structure?  
 (A) Enzymes  
 (B) Cell wall  
 (C) Nuclei  
 (D) More than one of the above  
 (E) None of the above
57. According to the recent report of forbes, which is the strongest currency in the world?  
 (A) Omani Rial  
 (B) Bahrain Dinar  
 (C) Kuwaiti Dinar  
 (D) More than one of the above  
 (E) None of the above
58. In which city of Maharashtra did PM Narendra Modi launch 8 AMRUT projects?  
 (A) Kollam  
 (B) Solapur  
 (C) Baroda  
 (D) More than one of the above  
 (E) None of the above



59. IIT Madras has tied up with whom to launch e Mobility Simulation Lab?  
 (A) Altair  
 (B) Farber Speciality Lab  
 (C) Starlink  
 (D) More than one of the above  
 (E) None of the above
60. Who won the Best Actor Award at the Academy Awards 2024 (Oscars)?  
 (A) Dwayne Johnson  
 (B) Tom Cruise  
 (C) Cillian Murphy  
 (D) More than one of the above  
 (E) None of the above
61. Who was recently selected as the ICC Women's T20i Cricketer of the year 2023?  
 (A) Smriti Mandhana (India)  
 (B) Hayley Mathews (West Indies)  
 (C) Nat Seiver - Brunt (England)  
 (D) More than one of the above  
 (E) None of the above
62. Who was Crowned Miss World 2024 in Mumbai?  
 (A) Miss Czech Kristina Pishkova  
 (B) Miss Lebanon Yasmira Zaytoun  
 (C) Miss India Sini Shetty  
 (D) More than one of the above  
 (E) None of the above
63. In which country will the clean Energy Investor Forum be organised by IPEF?  
 (A) France  
 (B) Spain  
 (C) Singapore  
 (D) More than one of the above  
 (E) None of the above
64. India has acquired the right to operate the foreign Sittwe Port, it is in which country?  
 (A) Sri Lanka  
 (B) Myanmar  
 (C) Bangladesh  
 (D) More than one of the above  
 (E) None of the above
65. Mangrove forest of Ganga Delta is called  
 (A) Sunderban  
 (B) Surendranagar  
 (C) Sundergarh  
 (D) More than one of the above  
 (E) None of the above
66. Which river is frequently changing its course of flow in Bihar  
 (A) Gandak  
 (B) Punpun  
 (C) Kosi  
 (D) More than one of the above  
 (E) None of the above
67. Plant roots gets water from soil as -  
 (A) Bound water  
 (B) Capillary water  
 (C) Hygroscopic water  
 (D) More than one of the above  
 (E) None of the above
68. How much equatorial diameter is larger than polar diameter?  
 (A) 36 km  
 (B) 49 km  
 (C) 43 km  
 (D) More than one of the above  
 (E) None of the above
69. The Indian Standard Time (IST) is taken at which longitude -  
 (A) 82.5° E  
 (B) 87.5° E  
 (C) 78.5° E  
 (D) More than one of the above  
 (E) None of the above
70. In India 'Green revolution' is known to credit to whom?  
 (A) Dr. V. Kurian  
 (B) Sri. S.L. Bahuguna  
 (C) Dr. M.S. Swaminathan  
 (D) More than one of the above  
 (E) None of the above





**PART - III**  
**(MATHEMATICS)**

71. How many rods of diameter 10 cm and length 1.4 m will be formed by melting a rod of radius 7 cm and length 10 m.
- (A) 14  
(B) 20  
(C) 18  
(D) More than one of the above  
(E) None of the above
72. The side of a regular hexagon is 8 m. Then its area is
- (A)  $100\sqrt{3} \text{ m}^2$   
(B)  $96\sqrt{3} \text{ m}^2$   
(C)  $90\sqrt{3} \text{ m}^2$   
(D) More than one of the above  
(E) None of the above
73. If the length of a cylindrical pipe is 70 cm and its diameter is 2.2 cm, and  $1 \text{ cm}^3$  of the pipe weighs 10 gm, then its weight is
- (A) 2662 gm  
(B) 3517 gm  
(C) 1662 gm  
(D) More than one of the above  
(E) None of the above
74. The product of roots of the quadratic equation  $2x^2 + 5\sqrt{3}x + 6 = 0$  is
- (A) 12  
(B) 5  
(C) 3  
(D) More than one of the above  
(E) None of the above
75. If the diameter of a wheel of a cycle is 70 cm, in 1720 rounds it will cover
- (A) 3784 m  
(B) 1892 m  
(C) 7568 m  
(D) More than one of the above  
(E) None of the above
76. On selling 20 chairs, Hari gets a profit equal to the selling price of 5 chairs. The percentage of gain is
- (A)  $33\frac{1}{3} \%$   
(B)  $66\frac{1}{3} \%$   
(C)  $66\frac{2}{3} \%$   
(D) More than one of the above  
(E) None of the above



77. A conical tent of height 24 m and radius of its base 7 m is required to cover by cloth. If breadth of the cloth is 50 m, then its length is

- (A) 9 m
- (B) 12 m
- (C) 11 m
- (D) More than one of the above
- (E) None of the above

78. The compound interest of an amount for 2 years with an interest 4% per year is ₹ 2,448. Then the simple interest of that amount with same interest rate and for same 2 years is :

- (A) ₹ 2,500
- (B) ₹ 2,300
- (C) ₹ 2,400
- (D) More than one of the above
- (E) None of the above

79. In 200 lt mixture of milk and water, the amount of water is 15%. The amount of milk that is required to be added into the mixture so that the amount of milk will be 87.5% is

- (A) 30 lt
- (B) 40 lt
- (C) 35 lt
- (D) More than one of the above
- (E) None of the above

80. Three metallic balls of radius 6, 8 and  $r$  cm respectively are melted and a new ball is formed. If the radius of the new ball is 12 cm, then the value of  $r$  is

- (A) 10 cm
- (B) 8 cm
- (C) 9 cm
- (D) More than one of the above
- (E) None of the above

81. A and B complete a work in 12 days and 15 days respectively. They worked for 4 days together and then A left. The remaining portion of the work will be completed by B in -

- (A)  $20\frac{2}{3}$  days
- (B) 6 days
- (C)  $\frac{25}{3}$  days
- (D) More than one of the above
- (E) None of the above

82. If the rate of sugar is increased by 25%, in order to not increase the expenditure on sugar a consumer has to reduce the use of sugar.

- (A) 10%
- (B) 18%
- (C) 20%
- (D) More than one of the above
- (E) None of the above





83. A square of area  $121 \text{ cm}^2$  is made by a copper wire. If a circle is made with the same wire, then its radius is

- (A) 7 cm
- (B) 11 cm
- (C) 10 cm
- (D) More than one of the above
- (E) None of the above

84. If radius of a circle is increased by 50%, then its area will be increased by

- (A) 50%
- (B) 125%
- (C) 75%
- (D) More than one of the above
- (E) None of the above

85. Areas of two similar triangles are  $81 \text{ cm}^2$  and  $49 \text{ cm}^2$  respectively. The ratio of their corresponding heights is

- (A) 7 : 9
- (B) 81 : 49
- (C) 9 : 7
- (D) More than one of the above
- (E) None of the above

86. Digging price of a tube well of depth 280 m and diameter 3 m with the rate ₹ 3.60 / cubic meter is

- (A) ₹ 7,128
- (B) ₹ 7,282
- (C) ₹ 2,728
- (D) More than one of the above
- (E) None of the above

87. The number that reduces the ratio 49 : 68 to the ratio 6 : 7 by adding to each of the number of the ratio is

- (A) 65
- (B) 75
- (C) 55
- (D) More than one of the above
- (E) None of the above

88. If 40% of 25% of a number is 80, then its 60% is

- (A) 480
- (B) 400
- (C) 450
- (D) More than one of the above
- (E) None of the above



89. If A, B and C complete a work in 30 days and A and B complete it in 50 days working together. Then C alone will complete it in

- (A) 60 days
- (B) 80 days
- (C) 75 days
- (D) More than one of the above
- (E) None of the above

90. The ratio of ages of father and son is 5 : 2. If the difference of their ages is 27 years, then the age of father after 6 years will be

- (A) 49 years
- (B) 51 years
- (C) 45 years
- (D) More than one of the above
- (E) None of the above

91. The value of  $x$  that satisfies  $x^x = 7^{x+49}$  is

- (A) 7
- (B) 21
- (C) 49
- (D) More than one of the above
- (E) None of the above

92. The quadratic equation whose roots are reciprocal of the roots of  $ax^2 + bx + c = 0$  is

- (A)  $cx^2 + bx + a = 0$
- (B)  $ax^2 + cx + b = 0$
- (C)  $bx^2 + cx + a = 0$
- (D) More than one of the above
- (E) None of the above

93. The remainder when  $x^{25} + 1$  is divided by  $x + 1$  is

- (A) 0
- (B) -1
- (C) 1
- (D) More than one of the above
- (E) None of the above

94. The sum of all the integers from 21 to 100 is

- (A) 5050
- (B) 4840
- (C) 4860
- (D) More than one of the above
- (E) None of the above





95. The value of  $\frac{\sqrt{9}\sqrt{64}}{\sqrt{0.04}}$  is

- (A) 120
- (B) 1200
- (C) 240
- (D) More than one of the above
- (E) None of the above

96.  $a^3 - b^3$  is equal to

- (A)  $(a - b)^3 - 3ab(a - b)$
- (B)  $(a + b)^3 - 3ab(a + b)$
- (C)  $(a - b)^3 + 3ab(a - b)$
- (D) More than one of the above
- (E) None of the above

97. If the equation  $x^2 + x(2x - m) + 12 = 0$  has equal and real roots, then the value of  $m$  is

- (A) 12
- (B)  $\pm 1$
- (C) -12
- (D) More than one of the above
- (E) None of the above

98. The rational number in the set of numbers

$$\left\{3^{1/3}, \sqrt{2}, \sqrt{4}, \sqrt{127}\right\} \text{ is}$$

- (A)  $\sqrt{4}$
- (B)  $\sqrt{127}$
- (C)  $\sqrt{2}$
- (D) More than one of the above
- (E) None of the above

99. The HCF of  $2x^3 + 2x$ ,  $x^2 + 1$ ,  $x^4 - 1$  is

- (A)  $x + 1$
- (B) 1
- (C)  $x^2 + 1$
- (D) More than one of the above
- (E) None of the above

100. If  $\frac{x+y}{x-y} = 3$ , then value of  $\frac{x}{y}$  is

- (A)  $\frac{1}{2}$
- (B)  $\frac{1}{3}$
- (C)  $\frac{2}{1}$
- (D) More than one of the above
- (E) None of the above



101. The value of  $\sin^2 40^\circ + \sin^2 50^\circ$  is

- (A) 1
- (B)  $2\sin^2 40^\circ$
- (C) 0
- (D) More than one of the above
- (E) None of the above

102. The value of

$\sin x \sin(2\pi + x) \sin(4\pi + x) \dots \sin(2n\pi + x)$  is

- (A)  $n \sin x$
- (B) 0
- (C)  $\sin^n x$
- (D) More than one of the above
- (E) None of the above

103. The shadow of a 100 metre long tower is  $100\sqrt{3}$ . Then the angle between the shadow and upper end of the tower is

- (A)  $60^\circ$
- (B)  $30^\circ$
- (C)  $45^\circ$
- (D) More than one of the above
- (E) None of the above

104. Cosine of sum of an angle and its supplementary angle is

- (A) 1
- (B) -1
- (C) 0
- (D) More than one of the above
- (E) None of the above

105. The value of  $\frac{\cos^2 \theta}{\sin \theta} + \sin \theta$  is

- (A)  $\sec \theta$
- (B)  $\tan \theta$
- (C)  $\operatorname{cosec} \theta$
- (D) More than one of the above
- (E) None of the above

106. The value of  $\sqrt{\frac{1 - \sin \theta}{1 + \sin \theta}}$  is equal to

- (A)  $\sec \theta - \tan \theta$
- (B)  $\tan \theta - \sec \theta$
- (C)  $\sec \theta + \tan \theta$
- (D) More than one of the above
- (E) None of the above

107. If  $\cos 50^\circ = 0.6428$ , then the value of  $\sin 40^\circ$  is

- (A) 1
- (B) 0.6428
- (C) 0
- (D) More than one of the above
- (E) None of the above





108. The value of  $\frac{\cos 90^\circ + \sin 0^\circ}{\cot 30^\circ}$  is

- (A)  $\frac{1}{2}$
- (B) 1
- (C) 0
- (D) More than one of the above
- (E) None of the above

109. If  $\sin A + \sin^2 A = 1$ , then  $\cos^2 A + \cos^4 A$  is

- (A) 1
- (B) 2
- (C) -1
- (D) More than one of the above
- (E) None of the above

110. The value of  $\sin^2 30^\circ + 2\tan^2 60^\circ - 5\cos 45^\circ$  is

- (A)  $\frac{17}{4}$
- (B)  $\frac{15}{4}$
- (C) 4
- (D) More than one of the above
- (E) None of the above

111. If the median and mean of a frequency distribution are 28 and 30 respectively, then the mode is

- (A) 24
- (B) 16
- (C) 34
- (D) More than one of the above
- (E) None of the above

112. Probability of getting a number which is divisible by 2 and 3 from the set of natural number is

- (A)  $\frac{1}{6}$
- (B)  $\frac{1}{3}$
- (C)  $\frac{2}{3}$
- (D) More than one of the above
- (E) None of the above

113. The relation between AM, GM and HM is

- (A)  $AM \geq GM \geq HM$
- (B)  $AM \geq GM \leq HM$
- (C)  $AM \leq GM \leq HM$
- (D) More than one of the above
- (E) None of the above



114. The mean value of squares of first  $n$  natural numbers is

(A)  $\frac{n(n+1)}{2}$

(B)  $\frac{(n+1)(2n+1)}{6}$

(C)  $\frac{n(n+1)(2n+1)}{6}$

(D) More than one of the above

(E) None of the above

115. Probability of getting six different faces by throwing six dies is

(A)  $\frac{6!}{6^6}$

(B) 1

(C)  $\frac{6^6}{6!}$

(D) More than one of the above

(E) None of the above

116. If a coin is tossed twice, the probability of getting at best one head is

(A)  $\frac{1}{4}$

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

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

(D) More than one of the above

(E) None of the above

117. A husband and wife appear in an interview for two vacancies in the same post. The

probability of husband's selection is  $\frac{1}{7}$  and

that of wife's selection is  $\frac{1}{5}$ . Then the probability that both of them are selected is

(A)  $\frac{12}{35}$

(B)  $\frac{11}{35}$

(C)  $\frac{1}{35}$

(D) More than one of the above

(E) None of the above

118. The mode of the sets of the values 11, 13, 15, 13, 17, 19, 17 is

(A) 17

(B) 15

(C) 13

(D) More than one of the above

(E) None of the above

119. The probability that A solves a problem is  $\frac{1}{2}$

and that of B is  $\frac{2}{3}$ . The probability that the problem is solved is

(A)  $\frac{1}{3}$

(B)  $\frac{5}{6}$

(C)  $\frac{1}{6}$

(D) More than one of the above

(E) None of the above





120. The median of the data 3, 7, 2, 5, 7, 1, 9, 6, 5 is

- (A) 5
- (B) 9
- (C) 7
- (D) More than one of the above
- (E) None of the above

121. Find the area of the shaded region, if the radius of each circle is 1 cm.



- (A)  $(4 - \pi) \text{ cm}^2$
- (B)  $(5 - \sqrt{3}\pi) \text{ cm}^2$
- (C)  $(2 - \sqrt{3}\pi) \text{ cm}^2$
- (D) More than one of the above
- (E) None of the above

122. If 4 men and 7 women can do a work in 60 days. Then in how many days will 8 men and 7 women finish the same work?

- (A) 40 days
- (B) 20 days
- (C) 30 days
- (D) More than one of the above
- (E) None of the above

123. A man sells an article at a profit of 25%. If he had bought it at 20% and sold it for ₹ 10.50 less, he would have gained 30%. Then the cost price of the article is

- (A) ₹ 50
- (B) ₹ 30
- (C) ₹ 40
- (D) More than one of the above
- (E) None of the above

124. A man rows 30 km downstream and 18 km upstream taking 5 hours each time. Then the velocity of the current is

- (A) 2.1 km/h
- (B) 3.1 km/h
- (C) 1.2 km/h
- (D) More than one of the above
- (E) None of the above

125. The ratio of water that is added to spirit to gain 25% by selling it at cost price is

- (A) 1 : 4
- (B) 3 : 4
- (C) 4 : 1
- (D) More than one of the above
- (E) None of the above



126. If 11 pencils are bought for ₹ 10 and 10 pencils are sold for ₹ 11; then the gain is:

- (A) 18%
- (B) 21%
- (C) 16%
- (D) More than one of the above
- (E) None of the above

127. If each of the dimensions of a rectangle is increased by 100%, then its area is increased by

- (A) 100%
- (B) 400%
- (C) 300%
- (D) More than one of the above
- (E) None of the above

128. The height of a cone is 4.8 cm and the diameter of its base is 4 cm. Then the slant height of it is

- (A) 4.2 cm
- (B) 6.2 cm
- (C) 5.2 cm
- (D) More than one of the above
- (E) None of the above

129. If perimeter of a circle is equal to the perimeter of a square, then ratio of their areas is

- (A) 14 : 11
- (B) 11 : 14
- (C) 13 : 10
- (D) More than one of the above
- (E) None of the above

130. The mean of five numbers is 18. If one number is excluded their mean is 16. Then the excluded number is

- (A) 25
- (B) 27
- (C) 26
- (D) More than one of the above
- (E) None of the above

131. If  $80\%$  of  $A = 50\%$  of  $B$  and  $B = x\%$  of  $A$ . Then the value of  $x$  is

- (A) 400
- (B) 160
- (C) 300
- (D) More than one of the above
- (E) None of the above





132. The perimeter of a rhombus is 100 cm. If one of its diagonals is 14 cm, then its area is

- (A) 144 cm<sup>2</sup>
- (B) 336 cm<sup>2</sup>
- (C) 225 cm<sup>2</sup>
- (D) More than one of the above
- (E) None of the above

133. The product of two numbers is 120 and sum of their squares is 289. Then the sum of the two numbers is

- (A) 23
- (B) 13
- (C) 7
- (D) More than one of the above
- (E) None of the above

134. A 120 m long train is travelling at a speed of 90 km/h. It will cross a railway platform of 230 m long in

- (A) 10 sec.
- (B) 20 sec.
- (C) 15 sec.
- (D) More than one of the above
- (E) None of the above

135. The area of the ring between two concentric circles whose circumferences are 88 cm and 132 cm is

- (A) 780 cm<sup>2</sup>
- (B) 660 cm<sup>2</sup>
- (C) 770 cm<sup>2</sup>
- (D) More than one of the above
- (E) None of the above

136. The perimeter of an equilateral triangle having area  $400\sqrt{3}$  sq.m is

- (A) 120 m
- (B) 90 m
- (C) 150 m
- (D) More than one of the above
- (E) None of the above

137. If the radius and height of a right circular cone are increased by 20%, then its volume will be increased by

- (A) 72.8%
- (B) 40%
- (C) 60%
- (D) More than one of the above
- (E) None of the above



138. The internal bisectors of  $\angle A$ ,  $\angle B$  and  $\angle C$  of a triangle ABC meet at O. If  $\angle A = 80^\circ$ , then the value of  $\angle BOC$  is

- (A)  $150^\circ$
- (B)  $100^\circ$
- (C)  $130^\circ$
- (D) More than one of the above
- (E) None of the above

139. On an amount of money the difference between simple interest and compound interest is ₹ 15 in 2 years at the rate of interest 5% per annum. Then the amount is

- (A) ₹ 6,000
- (B) ₹ 5,500
- (C) ₹ 5,000
- (D) More than one of the above
- (E) None of the above

140. A tank has two taps A and B. Tap A can fill it in 5 minutes and tap B can make it empty in 10 minutes. If both the taps are open simultaneously the tank will fill in

- (A) 10 minutes
- (B) 14 minutes
- (C) 16 minutes
- (D) More than one of the above
- (E) None of the above

141. A train passes a pole in 8 seconds and a platform of 120 meter long in 20 seconds. The length of the train is

- (A) 80 m
- (B) 150 m
- (C) 120 m
- (D) More than one of the above
- (E) None of the above

142. In a parallelogram

- ☒ (A) Opposite angles are equal
- (B) Only two sides are parallel
- ☒ (C) Opposite sides are equal
- (D) More than one of the above
- (E) None of the above

143. Present population of a town is 1,76,400. If the rate of increase is 5% per annum, its population after two years will be

- (A) 1,90,000
- (B) 1,94,481
- (C) 2,00,000
- (D) More than one of the above
- (E) None of the above





144. The simple interest of principal is  $\frac{9}{10}$  of itself after  $4\frac{1}{2}$  years. Then the rate of interest is
- (A) 20%  
(B) 5%  
(C) 10%  
(D) More than one of the above  
(E) None of the above
145. 2 men and 3 boys can do a work in 6 days and 8 men and 5 boys can do this same work in 2 days. Working ratio of a man to a boy is
- (A) 1 : 2  
(B) 3 : 1  
(C) 2 : 1  
(D) More than one of the above  
(E) None of the above
146. A cone, a hemisphere and a cylinder have same base and equal height. The ratio of volumes is
- (A) 3 : 2 : 4  
(B) 1 : 3 : 2  
(C) 1 : 2 : 3  
(D) More than one of the above  
(E) None of the above
147. Number of years required for the compound interest of ₹ 1,000 at the rate of 10% to become ₹ 210 is
- (A) 4 years  
(B) 3 years  
(C) 2 years  
(D) More than one of the above  
(E) None of the above
148. If the interior angles of a regular polygon are ten times of its exterior angles, then the sides of the polygon are
- (A) 12  
(B) 22  
(C) 18  
(D) More than one of the above  
(E) None of the above
149. After the rebate of 12.5% on the selling price of ₹ 12,560. The goods should be sold at
- (A) ₹ 11,000  
(B) ₹ 10,990  
(C) ₹ 12,000  
(D) More than one of the above  
(E) None of the above
150. Two chords of a circle of radius 8 cm are 6 cm each. If one chord is at a distance 3.5 cm from the centre, then the other is at a distance of
- (A) 5 cm  
(B) 3.5 cm  
(C) 4 cm  
(D) More than one of the above  
(E) None of the above

