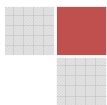


**PART - III**  
**QUANTITATIVE APTITUDE**

101. The value of  $(0.\overline{63} + 0.\overline{37})$  is  
(A) 1 (B)  $\frac{100}{99}$  (C)  $\frac{99}{100}$  (D)  $\frac{100}{33}$
102. The length of a road is one kilometre. The number of plants required for plantation at a gap of 20 metres in both sides of the road is  
(A) 102 (B) 100 (C) 51 (D) 50
103. The square root of  $21\frac{51}{169}$  is  
(A)  $5\frac{8}{13}$  (B)  $4\frac{8}{13}$  (C)  $4\frac{3}{13}$  (D)  $5\frac{5}{13}$
104. If  $\frac{3}{5}$ th of a cistern is filled in 1 minute, the time to fill the rest is  
(A) 40 sec (B) 30 sec  
(C) 36 sec (D) 24 sec
105. 18 boys can do a piece of work in 24 days. In how many days can 27 boys do the same work?  
(A) 16 (B) 32 (C) 23 (D) 48
106. A fan is listed at ₹ 150 and a discount of 20% is given. Then the selling price is  
(A) ₹ 180 (B) ₹ 150  
(C) ₹ 120 (D) ₹ 110
107. The discount equivalent to two successive discounts of 10% is  
(A) 15% (B) 19% (C) 20% (D) 21%
108. The marked price of a table is ₹ 800. A retailer bought it after two successive discounts of 10% and 15%. He spent ₹ 13 on transportation and sold it for ₹ 875. His profit was  
(A) 40% (B) 37% (C) 28% (D) 25%
109. The ratio of the incomes of A and B as well as of B and C is 3 : 2. If one third of A's income exceeds one fourth of C's income by ₹ 1000, what is B's income in ₹?  
(A) 3000 (B) 2500  
(C) 3500 (D) 4000
110. The students in three classes are in the ratio 2 : 3 : 5. If 20 students are increased in each class, the ratio changes to 4 : 5 : 7. The total number of students before the increase was  
(A) 160 (B) 120 (C) 100 (D) 10
111. A container contains 60 kg of milk. From this container 6 kg of milk was taken out and replaced by water. This process was repeated further two times. The amount of milk left in the container is  
(A) 34.24 kg (B) 39.64 kg  
(C) 43.74 kg (D) 47.6 kg
112. The mean of 11 numbers is 35. If the mean of first 6 numbers is 32, and that of the last 6 numbers is 37, find the sixth number.  
(A) 28 (B) 29 (C) 30 (D) 27
113. In a 20 over match, the required run rate to win is 7.2. If the run rate is 6 at the end of the 15th over, the required run rate to win the match is  
(A) 1.2 (B) 13.2 (C) 10.8 (D) 12
114. The average weight of the 8 oarsmen in a boat is increased by  $1\frac{1}{2}$  kg when one of the crew who weighs 60 kg is replaced by a new man. The weight of the new man in kg is  
(A) 70 (B) 68 (C) 71 (D) 72



115. A shopkeeper bought 15 kg of rice at the rate of ₹ 29 per kg and 25 kg of rice at the rate of ₹ 20 per kg. He sold the mixture of both types of rice at the rate of ₹ 27 per kg. His profit in this transaction is  
 (A) ₹ 125 (B) ₹ 150  
 (C) ₹ 140 (D) ₹ 145
116. By selling 33 metres of cloth, a person gains the cost of 11 metres. Find his gain %.  
 (A)  $33\frac{1}{3}\%$  (B)  $33\frac{1}{2}\%$   
 (C) 33% (D)  $34\frac{1}{3}\%$
117. If a man were to sell his wrist-watch for ₹ 720, he would lose 25%. What price must he sell at for to gain 25%?  
 (A) ₹ 960 (B) ₹ 900  
 (C) ₹ 1000 (D) ₹ 1200
118. If the length of a rectangle increases by 12% and the breadth by 10% then the % increase in area is  
 (A) 22% (B) 20%  
 (C) 23.2% (D) 20.2%
119. During a month-long annual sale, a shopkeeper sells his goods at a discount of 50%. But in the last week, he offers an additional discount of 40%. If the original price of a shirt is ₹  $x$ , then the price, in rupees, during the last week of the sale will be  
 (A) 90% of  $x$  (B) 70% of  $x$   
 (C) 30% of  $x$  (D) 10% of  $x$
120. A boy can swim in still water at a speed of 10 km/hr. If the speed of the current would have been 5 km/hr, then the boy could swim 60 km  
 (A) upstream in 4 hours  
 (B) downstream in 12 hours  
 (C) upstream in 6 hours  
 (D) downstream in 4 hours
121. A train is running at a uniform speed of 60 km/hr. If the length of the train is 73 m, then the time taken by the train to cross a bridge 87 m. long is  
 (A) 4.8 sec (B) 2.67 sec  
 (C) 2.19 sec (D) 2.51 sec
122. ₹ 12,000 is divided into two parts so that the simple interest on the first part for 3 years at 12% per annum may be equal to the simple interest on the second part for  $4\frac{1}{2}$  years at 16% per annum. The ratio of the first part to the second part is  
 (A) 2 : 1 (B) 1 : 2  
 (C) 2 : 3 (D) 3 : 2
123. A sum of ₹ 8000 will amount to ₹ 8820 in 2 years if the interest is calculated every year. The rate of compound interest is  
 (A) 6 (B) 7 (C) 3 (D) 5
124. The maximum length of a pencil that can be kept in a rectangular box of dimensions 8 cm × 6 cm × 2 cm is  
 (A)  $2\sqrt{13}$  cm (B)  $2\sqrt{14}$  cm  
 (C)  $2\sqrt{26}$  cm (D)  $10\sqrt{2}$  cm
125. What is the area of the triangle whose sides are 9 cm, 10 cm and 11 cm?  
 (A)  $30\text{ cm}^2$  (B)  $60\text{ cm}^2$   
 (C)  $30\sqrt{2}\text{ cm}^2$  (D)  $60\sqrt{2}\text{ cm}^2$
126. If the radius of a sphere be doubled, the area of its surface will become  
 (A) Double  
 (B) Three times  
 (C) Four times  
 (D) None of the mentioned



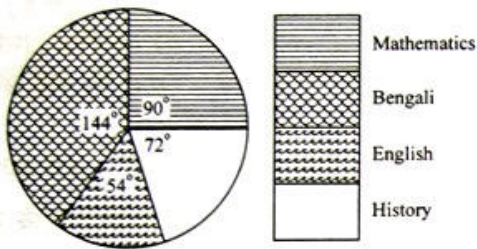
127. The area of the curved surface and the area of the base of a right circular cylinder are  $a$  square cm and  $b$  square cm respectively. The height of the cylinder is
- (A)  $\frac{2a}{\sqrt{\pi b}}$  cm      (B)  $\frac{a\sqrt{b}}{2\sqrt{\pi}}$  cm  
 (C)  $\frac{a}{2\sqrt{\pi b}}$  cm      (D)  $\frac{a\sqrt{\pi}}{2\sqrt{b}}$  cm
128. The area of an isosceles triangle is 4 square unit. If the length of the third side is 2 unit, the length of each equal side is
- (A) 4 unit      (B)  $2\sqrt{3}$  unit  
 (C)  $\sqrt{17}$  unit      (D)  $3\sqrt{2}$  unit
129. The distance between the centres of two equal circles each of radius 3 cm is 10 cm. The length of a transverse tangent is
- (A) 4 cm      (B) 6 cm  
 (C) 8 cm      (D) 10 cm
130. The graph of the equation  $2x - 3y = 6$  intersects the  $y$ -axis at the point
- (A)  $(-2, 0)$       (B)  $(0, -2)$   
 (C)  $(2, 3)$       (D)  $(2, -3)$
131. If  $a^2 + b^2 + c^2 = ab + bc + ca$ , where  $a, b, c$  are non zero real nos., then the value of  $\frac{a+b}{c}$  is
- (A) 2      (B) 1  
 (C) 0      (D) -1
132. If the expression  $\frac{x^2}{y^2} + tx + \frac{y^2}{4}$  is a perfect square, then the values of  $t$  is
- (A)  $\pm 1$       (B)  $\pm 2$   
 (C) 0      (D)  $\pm 3$
133. If  $x + \frac{1}{x} = 3$ , then the value of  $x^5 + \frac{1}{x^5}$  is
- (A) 120      (B) 121  
 (C) 123      (D) 126
134. A chord of length 8 cm is at a distance 3 cm from the centre of the circle. The length of the radius of the circle is
- (A)  $\sqrt{73}$  cm      (B)  $\sqrt{55}$  cm  
 (C) 5 cm      (D) 10 cm
135. In  $\triangle ABC$ ,  $\angle B = 60^\circ$  and  $\angle C = 40^\circ$ . If  $AD$  and  $AE$  be respectively the internal bisector of  $\angle A$  and perpendicular on  $BC$ , then the measure of  $\angle DAE$  is
- (A)  $5^\circ$       (B)  $10^\circ$       (C)  $40^\circ$       (D)  $60^\circ$
136. A circle (with centre at  $O$ ) is touching two intersecting lines  $AX$  and  $BY$ . The two points of contact  $A$  and  $B$  subtend an angle of  $65^\circ$  at any point  $C$  on the circumference of the circle. If  $P$  is the point of intersection for the two lines, then the measure of  $\angle APO$  is
- (A)  $25^\circ$       (B)  $65^\circ$       (C)  $90^\circ$       (D)  $40^\circ$
137. Internal bisectors of  $\angle B$  and  $\angle C$  of  $\triangle ABC$  intersect at  $O$ . If  $\angle BOC = 102^\circ$ , then the value of  $\angle BAC$  is
- (A)  $12^\circ$       (B)  $24^\circ$       (C)  $48^\circ$       (D)  $60^\circ$
138. If  $\sin(3x - 20^\circ) = \cos(3y + 20^\circ)$ , then the value  $(x + y)$  is
- (A)  $20^\circ$       (B)  $30^\circ$       (C)  $40^\circ$       (D)  $45^\circ$
139. In circular measure, the value of the angle  $11^\circ 15'$  is
- (A)  $\frac{\pi^c}{16}$       (B)  $\frac{\pi^c}{8}$   
 (C)  $\frac{\pi^c}{4}$       (D)  $\frac{\pi^c}{12}$



140. The shadow of a tower becomes 60 metres longer where the altitude of the sun changes from  $45^\circ$  to  $30^\circ$ . Then the height of the tower is

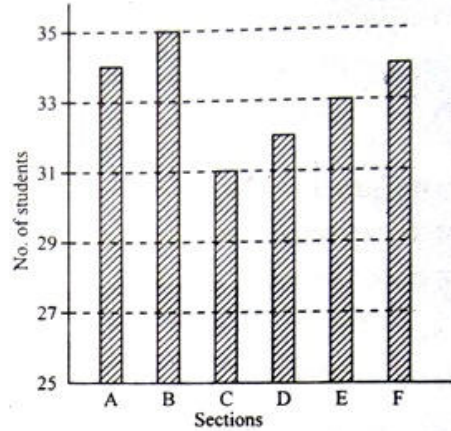
- (A)  $20(\sqrt{3} + 1)$  m (B)  $24(\sqrt{3} + 1)$  m  
 (C)  $30(\sqrt{3} + 1)$  m (D)  $30(\sqrt{3} - 1)$  m

The following pie-chart represents the result of 600 successful students in various subjects at an examination. Study the chart and answer question nos. 141 to 145.



141. The ratio of students who passed in Bengali, to the students who passed in History is  
 (A) 1 : 2 (B) 2 : 1  
 (C) 3 : 4 (D) 3 : 5
142. The number of students passed in Bengali is greater than the number of students passed in History by  
 (A) 150 (B) 60 (C) 120 (D) 100
143. The percentage of students who passed in English is  
 (A) 15 (B) 20 (C) 5 (D) 12
144. The number of students passed in English is less than the number of students passed in Mathematics by  
 (A) 50 (B) 60 (C) 90 (D) 75
145. The highest number of students passed in a subject in percentage is  
 (A) 20 (B) 25 (C) 40 (D) 35

The bar graph given below shows the total number of students in six sections of a class VI of a certain school. Using this graph, answer the question nos. 146 to 150.



146. Which two sections have the same number of students?  
 (A) Sec A and Sec E  
 (B) Sec A and Sec F  
 (C) Sec C and Sec D  
 (D) Sec B and Sec F
147. What is the ratio of the number of students in section A to that in section C?  
 (A) 34 : 35 (B) 32 : 35  
 (C) 31 : 35 (D) 34 : 31
148. What is the total number of students in class VI?  
 (A) 200 (B) 209  
 (C) 199 (D) 179
149. The ratio of the students in section B and section C is  
 (A) 31 : 34 (B) 34 : 35  
 (C) 35 : 31 (D) 31 : 35
150. The percentage of students in section C out of the total students in class VI is approximately  
 (A) 17.58 (B) 16.08  
 (C) 16.58 (D) 15.57

