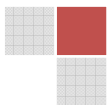


PART - III
QUANTITATIVE APTITUDE

101. The largest among the numbers $(0.1)^2$, $\sqrt{0.0121}$, 0.12 and $\sqrt{0.0004}$ is
 (A) $(0.1)^2$ (B) $\sqrt{0.0121}$
 (C) 0.12 (D) $\sqrt{0.0004}$
102. If $1! + 2! + 3! + 4! + \dots + 100!$ is divided by 8 then the remainder is
 (A) 1 (B) 2 (C) 3 (D) 5
103. The last digit of 3^{40} is
 (A) 1 (B) 3 (C) 7 (D) 9
104. 30 men can repair a road in 18 days. They are joined by 6 more workers. Now the road can be repaired in
 (A) 14 days (B) 15 days
 (C) 16 days (D) 17 days
105. A, B and C can complete a piece of work in 12, 24 and 36 days respectively. In how many days will they together complete the same work?
 (A) $5\frac{6}{11}$ (B) 4 (C) $6\frac{6}{11}$ (D) 6
106. The selling price of a video game is ₹ 740 and the discount allowed is 7.5%. The marked price of the video game is
 (A) ₹ 600 (B) ₹ 700
 (C) ₹ 800 (D) ₹ 900
107. In selling an article, the single discount equivalent to two successive discounts of 25% and 5% is
 (A) 28.75% (B) 30%
 (C) 27.5% (D) 26%
108. To gain 8% after allowing a discount of 10%, by what per cent cost price should be hiked in the list price?
 (A) 9% (B) 11% (C) 18% (D) 20%
109. Two vessels A and B contain milk and water mixed in the ratio 4 : 3 and 2 : 3. The ratio in which these mixture be mixed to form a new mixture containing half milk and half water is
 (A) 7 : 5 (B) 6 : 5
 (C) 5 : 6 (D) 4 : 3
110. The ratio between Sumit's and Prakash's age at present is 2 : 3. Sumit is 6 years younger than Prakash. The ratio of Sumit's age to Prakash's age after 6 years will be
 (A) 2 : 3 (B) 1 : 2
 (C) 4 : 3 (D) 3 : 4
111. A milkman makes 20% profit by selling milk mixed with water at ₹ 9 per litre. If the cost price of 1 litre pure milk is ₹ 10, then the ratio of milk and water in the said mixture is
 (A) 3 : 1 (B) 4 : 1
 (C) 3 : 2 (D) 4 : 3
112. Average age of 8 men is increased by 3 years when two of them whose ages are 30 and 34 years are replaced by 2 persons. What is the average age of the 2 persons?
 (A) 24 years (B) 32 years
 (C) 44 years (D) 48 years
113. The average age of a family of 10 members is 20 years. If the age of the youngest member of the family is 10 years, then the average age of the members of the family just before the birth of the youngest member was approximately
 (A) 27.14 years (B) 12.5 years
 (C) 14.28 years (D) 14.01 years

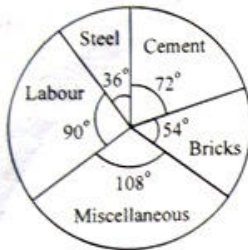
114. The average of four consecutive even numbers is 15. The 2nd highest number is
(A) 12 (B) 18 (C) 14 (D) 16
115. A man sells two chairs at ₹ 120 each and by doing so gains 25% on one chair and loses 25% on the other. His loss on the whole in ₹ is
(A) 20 (B) 16 (C) 25 (D) 30
116. A book vendor sold a book at a loss of 10%. Had he sold it for ₹ 108 more, he would have earned a profit of 10%. Find the cost of the book.
(A) ₹ 442 (B) ₹ 540
(C) ₹ 648 (D) ₹ 740
117. A sells a cycle to B at a profit of 5% and B sells it to C at a profit of 10%. If C pays ₹ 2310 for it, the cost price of A is
(A) ₹ 2000 (B) ₹ 2100
(C) ₹ 1900 (D) ₹ 2010
118. A number is divided into two parts in such a way that 80% of 1st part is 3 more than 60% of 2nd part and 80% of 2nd part is 6 more than 90% of the 1st part. Then the number is
(A) 125 (B) 130
(C) 135 (D) 145
119. A reduction of 10% in the price of wheat enables a man to buy 50 gram of wheat more for a rupee. How much wheat could originally be had for a rupee?
(A) 400 grams (B) 500 grams
(C) 450 grams (D) 350 grams
120. A train starts from a place A at 6 a.m. and arrives at another place B at 4:30 p.m. on the same day. If the speed of the train is 140 km per hour, find the distance travelled by the train?
(A) 420 km (B) 230 km
(C) 320 km (D) 400 km
121. P travels for 6 hours at the rate of 5 km/hour and for 3 hours at the rate of 6 km/hour. The average speed of the journey in km/hour is
(A) $3\frac{1}{5}$ (B) $5\frac{1}{3}$ (C) $1\frac{2}{9}$ (D) $2\frac{2}{5}$
122. A certain sum of money at simple interest amounts to ₹ 1012 in $2\frac{1}{2}$ years and to ₹ 1067.20 in 4 years. The rate of interest per annum is
(A) 2.5% (B) 3% (C) 4% (D) 5%
123. A certain amount of money at $r\%$, compounded annually after two and three years becomes ₹ 1440 and ₹ 1728 respectively. r is
(A) 5 (B) 10 (C) 15 (D) 20
124. The edges of a rectangular box are in the ratio 1 : 2 : 3 and its surface area is 88 cm^2 . The volume of the box is
(A) 24 cm^3 (B) 48 cm^3
(C) 64 cm^3 (D) 120 cm^3
125. For a triangle, base is $6\sqrt{3}$ cm and two base angles are 30° and 60° . Then height of the triangle is
(A) $3\sqrt{3}$ cm (B) 4.5 cm
(C) $4\sqrt{3}$ cm (D) $2\sqrt{3}$ cm
126. The base of a right circular cone has the same radius a as that of a sphere. Both the sphere and the cone have the same volume. Height of the cone is
(A) $3a$ (B) $4a$ (C) $\frac{7}{4}a$ (D) $\frac{7}{3}a$
127. The radius and height of a cylinder are in the ratio 5 : 7 and its volume is 550 cm^3 . Calculate its curved surface area in sq. cm.
(A) 110 (B) 444
(C) 220 (D) 616

128. If the length of each side of an equilateral triangle is increased by 2 unit, the area is found to be increased by $3 + \sqrt{3}$ square unit. The length of each side of the triangle is
 (A) $\sqrt{3}$ unit (B) 3 unit
 (C) $3\sqrt{3}$ unit (D) $1 + \sqrt{3}$ unit
129. The diameter of the moon is assumed to be one fourth of the diameter of the earth. Then the ratio of the volume of the earth to that of the moon is
 (A) 64 : 1 (B) 1 : 64
 (C) 60 : 7 (D) 7 : 60
130. If a linear equation is of the form $x = k$ where k is a constant, then graph of the equation will be
 (A) a line parallel to x -axis
 (B) a line cutting both the axes
 (C) a line marking positive acute angle with x -axis
 (D) a line parallel to y -axis
131. If $a = 34$, $b = c = 33$, then the value of $a^3 + b^3 + c^3 - 3abc$ is
 (A) 0 (B) 111
 (C) 50 (D) 100
132. If $(a^2 + b^2)^3 = (a^3 + b^3)^2$, then $\frac{a}{b} + \frac{b}{a}$ is
 (A) $\frac{1}{3}$ (B) $\frac{2}{3}$
 (C) $-\frac{1}{3}$ (D) $-\frac{2}{3}$
133. If $x + \frac{1}{x} = 5$, then the value of $\frac{x^4 + 3x^3 + 5x^2 + 3x + 1}{x^4 + 1}$ is
 (A) $\frac{43}{23}$ (B) $\frac{47}{21}$ (C) $\frac{41}{23}$ (D) $\frac{45}{21}$
134. If in a triangle, the circumcentre, incentre, centroid and orthocentre coincide, then the triangle is
 (A) Acute-angled (B) Isosceles
 (C) Right-angled (D) Equilateral
135. The internal bisectors of $\angle ABC$ and $\angle ACB$ of $\triangle ABC$ meet each other at O . If $\angle BOC = 110^\circ$, then $\angle BAC$ is equal to
 (A) 40° (B) 55°
 (C) 90° (D) 110°
136. AC is the diameter of a circumcircle of $\triangle ABC$. Chord ED is parallel to the diameter AC . If $\angle CBE = 50^\circ$, then the measure of $\angle DEC$ is
 (A) 50° (B) 90°
 (C) 60° (D) 40°
137. O is the incentre of $\triangle ABC$ and $\angle BOC = 110^\circ$. Find $\angle BAC$
 (A) 40° (B) 45°
 (C) 50° (D) 55°
138. The numerical value of $\left(\frac{1}{\cos\theta} + \frac{1}{\cot\theta}\right)\left(\frac{1}{\cos\theta} - \frac{1}{\cot\theta}\right)$ is
 (A) 0 (B) -1
 (C) +1 (D) 2
139. If $\frac{\sin\theta + \cos\theta}{\sin\theta - \cos\theta} = \frac{5}{4}$, the value of $\frac{\tan^2\theta + 1}{\tan^2\theta - 1}$ is
 (A) $\frac{25}{16}$ (B) $\frac{41}{9}$
 (C) $\frac{41}{40}$ (D) $\frac{40}{41}$



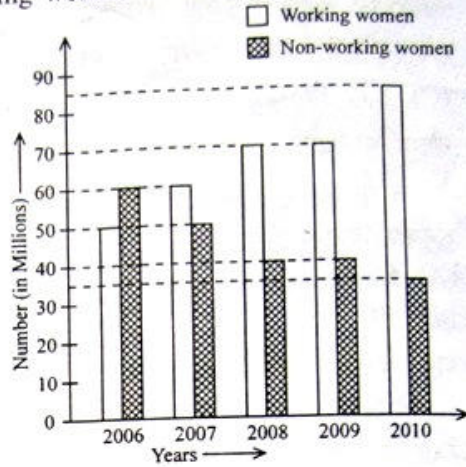
140. An aeroplane when flying at a height of 3125 m from the ground passes vertically below another plane at an instant when the angles of elevation of the two planes from the same point on the ground are 30° and 60° respectively. The distance between the two planes at that instant is
- (A) 6520 m (B) 6000 m
(C) 5000 m (D) 6250 m

The following pie-chart shows the expenditure incurred on the construction of a house in a city. Study the chart and answer the question nos. 141 to 145.



141. The mean at the expenditure is on
(A) Brick (B) Cement
(C) Steel (D) Labour
142. The ratio expenditure on Steel, Cement and Bricks is
(A) 2 : 4 : 3 (B) 4 : 2 : 3
(C) 3 : 2 : 4 (D) 4 : 3 : 2
143. The highest expenditure in percentage is
(A) 40% (B) 30% (C) 45% (D) 60%
144. What part of expenditure on labour is in respect of total expenditure ?
(A) $\frac{3}{10}$ part (B) $\frac{5}{8}$ part
(C) $\frac{1}{4}$ part (D) $\frac{7}{18}$ part
145. Of the total expenditure, the percentage of expenditure on steel and bricks together is
(A) 90% (B) 20% (C) 25% (D) 30%

Study the following multiple bar graph carefully and answer the question nos. 146 to 150. Survey of the number of working and non-working women over the years.



146. The number of non-working women in the year 2010 was approximately (correct up to an integer) what per cent of total number of working as well as non-working women in that year ?
(A) 23% (B) 25% (C) 29% (D) 31%
147. What is the ratio of numbers of working women to the non-working women in the year 2009 ?
(A) 7 : 4 (B) 4 : 7 (C) 2 : 3 (D) 3 : 2
148. What is the ratio of the number of women working in the year 2006 to the number of women working in the year 2010 ?
(A) 5 : 17 (B) 17 : 5
(C) 17 : 10 (D) 10 : 17
149. In which year was the difference between the number of working and non-working women the highest ?
(A) 2007 (B) 2008
(C) 2009 (D) 2010
150. In which year or years, the difference between the number of working and non-working women the lowest ?
(A) 2006 and 2007 (B) 2007 and 2008
(C) Only 2006 (D) Only 2007

