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PART-C

NUMERICAL APTITUDE

101. A reduction of 20% in the price of an apple enables a man to buy 10 apples more for Rs. 54. The reduced price of apple per dozen is
(A) Rs. 4.32 (B) Rs. 12.96
(C) Rs. 10.80 (D) Rs. 14.40

102. Price of a commodity has increased by 60%. By what per cent must a consumer reduce the consumption of the commodity so as not to increase the expenditure?
(A) 37 (B) 37.5
(C) 40.5 (D) 60

103. The cost of an apple is twice that of a banana and the cost of a banana is 25% less than that of a guava. If the cost of each type of fruit increase by 10%, then the percentage increase in cost of 4 bananas, 2 apples and 3 guavas is
(A) 10% (B) 12%
(C) 16% (D) 18%

104. Walking $\frac{6}{7}$ th of his usual sped, a man is 12 minutes too late. The usual time taken by him to cover that distance is
(A) 1 hour
(B) 1 hour 12 minutes
(C) 1 hour 15 minutes
(D) 1 hour 20 minutes

105. If I walk at 5 km / hour, I miss a train by 7 minutes. If, however, I walk at 6 km / hour, I reach the station 5 minutes before the departure of the train. The distance (in km) between my house and the station is
(A) 6 (B) 5
(C) 4 (D) 3

106. Rs. 800 becomes Rs. 956 in 3 years at a certain rate of simple interest. If the rate of interest is increased by 4%, what amount will Rs. 800 become in 3 years?
(A) Rs. 1020.80 (B) Rs. 1025
(C) Rs. 1052 (D) Rs. 1050

107. Simple interest on a certain sum is $\frac{16}{25}$ of the sum. The rate per cent if the rate per cent and time (in years) are equal, is
(A) 6% (B) 8%
(C) 10% (D) 12%

108. If the difference between S.I. and C.I. for 2 years on a sum of money lent at 5% is Rs. 6, then the sum is
(A) Rs. 2200 (B) Rs. 2400
(C) Rs. 2600 (D) Rs. 2000

109. A hemisphere and a cone have equal bases. If their heights are also equal, the ratio of their curved surface will be
(A) $1:\sqrt{2}$ (B) $\sqrt{2}:1$
(C) 1 : 2 (D) 2 : 1

110. If $x = \frac{\sqrt{5}+1}{\sqrt{5}-1}$, then, the value of $5x^2 - 5x - 1$ is
(A) 0 (B) 3
(C) 4 (D) 5

111. When 2^{23} is divided by 10, the remainder will be
(A) 2 (B) 3
(C) 4 (D) 8

112. The value of $3 \div \cfrac{3}{3+\cfrac{1}{3+\frac{1}{3}}}$ is
(A) $\frac{40}{11}$ (B) $\frac{43}{11}$
(C) $\frac{46}{11}$ (D) $\frac{41}{11}$

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113. Find the unit digit in the product $(4387)^{245} \times (621)^{72}$
(A) 1 (B) 2
(C) 5 (D) 7

114. If $\sqrt{2}$ = 1.4142 find the value of

$$2\sqrt{2}+\sqrt{2}+\frac{1}{2+\sqrt{2}}+\frac{1}{\sqrt{2}-2}$$

(A) 1.4144
(B) 2.8284
(C) 28.284
(D) 2.4142

115. If X * Y = $Y^2 + Y^2 - XY$ then 11 * 13 is
(A) 117 (B) 147
(C) 290 (D) 433

116. The value of $\frac{(3.2)^3-0.008}{(3.2)^3+0.64+0.04}$ is
(A) 0 (B) 2.994
(C) 3.208 (D) 3

117. If $a^{\frac{1}{3}}$ = 11, then the value of $a^2 - 33ia$ is
(A) 1331331 (B) 1331000
(C) 1334331 (D) 1330030

118. If $\sqrt{a+\frac{x}{961}}=\frac{32}{31}$, then the value of x is
(A) 63 (B) 61
(C) 65 (D) 64

119. If *a* and *b* are odd numbers, then which of the following is even?
(A) a + b + ab *(B)* $a + b - 1$
(C) $a + b + 1$ *(D)* $a + b + 2ab$

120. $2^{16} - 1$ is divisible by
(A) 11 (B) 13
(C) 17 (D) 19

121. The HCF and LCM of two numbers are 12 and 924 respectively. Then the number of such pairs is
(A) 0 (B) 1
(C) 2 (D) 3

122. What is the least number which, when divided by 4, 6, 7, 8 gives the remainder 3 but is divisible by 9 ?
(A) 1463 (B) 1573
(C) 1683 (D) 1793

123. Three numbers are in the ratio 3 : 4 : 5. The sum of the largest and the smallest equals the sum of the second and 52. The smallest number is
(A) 20 (B) 27
(C) 39 (D) 52

124. If the radius of a circle is increased by 50%, its area is increased by
(A) 125% (B) 100%
(C) 75% (D) 50%

125. A and B working separately can do a piece of work in 9 and 12 days respectively. If the work for a day alternately with a beginning, the work would be completed in
(A) $10\frac{2}{3}$ days (B) $10\frac{1}{2}$ days
(C) $10\frac{1}{4}$ days (D) $10\frac{1}{3}$ days

126. A and B together can do a work in 10 days. B and C together can do the same work in 6 days. A and C together can do the work in 12 days. Then A, B and C together can do the work in
(A) 28 days (B) 14 days
(C) $5\frac{5}{7}$ days (D) $8\frac{2}{7}$ days

127. A does half as much work as B in three-fourth of the time. If together they take 18 days to complete a work, how much time shall B take to do it alone?
(A) 30 days (B) 35 days
(C) 40 days (D) 45 days

128. If a wire is bent into the shape of a square, then the area of the square so formed is $81cm^2$. When the wire is rebent into a

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semicircular shape, then the area (in cm^2) of the semicircle will be (Take $\pi=\frac{2}{7}$)

(A) 22 (B) 44
(C) 77 (D) 154

129. Marbles a diameter 1.4 cm are dropped into a cylindrical beaker containing some water and are fully submerged. The diameter of the beaker is 7 cm. Find how many marbles have been dropped in it if the water rises by 5.6 cm.

(A) 50 (B) 150
(C) 250 (D) 350

130. Water is flowing at the rate of 3km/hr through a circular pipe of 20 cm internal diameter into a circular cistern of diameter 10m and depth 2 m. In how much time will the cistern be filled?

(A) 1 hr (B) 1 hr 40 mins
(C) 1 hr 20 mins (D) 2 hr s 40 mins

131. A bicycle wheel makes 5000 revolution in moving 11 km. The diameter of the wheel, in cm, is

(A) 35 (B) 55
(C) 65 (D) 70

132. At each corner of a triangular field of sides 26 m, 28 m and 30 m, a cow is tethered by a rope of length 7 m. The area (in m^2) unglazed by the cows is

(A) 336 (B) 259
(C) 154 (D) 77

133. A shopkeeper allows 23% commission on his advertised price and still makes a profit of 10%. If he gains Rs. 56 on one item, his advertised price of the item, in Rs. is

(A) 820 (B) 780
(C) 790 (D) 800

134. The single discount equal to three consecutive discounts of 10%, 12% and 5% is

(A) 26.27% (B) 24.76%
(C) 9% (D) 11%

135. If x : y = 5 : 6, then $(3x^2 – 2y^2) : (y^2 – x^2)$ is

(A) 7 : 6 (B) 11 : 3
(C) 3 : 11 (D) 6 : 7

136. An alloy contains copper, zinc and nickel in the ratio of 5 : 3 : 2. The quantity of nickel in kg that must be added to 100 kg of this alloy to have the new ratio 5 : 2 : 3, is

(A) 8 (B) 10
(C) 12 (D) 15

137. The ratio of the ages of Ram and Rahim 10 years ago was 1 : 3. The ratio of the their ages five years hence will be 2 : 3. Then the ratio of the their present ages is

(A) 1 : 2 (B) 3 : 5
(C) 3 : 4 (D) 2 : 5

138. The incomes of A, B and C are in the ratio 7: 9 : 12 and their spending are in the ratio 8 : 9 : 15. If A saves $\frac{1}{4}$ th of his income, then the saving of A, B and C are in the ratio of

(A) 69 : 56 : 48 (B) 47 : 74: 99
(C) 37 : 72: 49 (D) 56 : 99 : 69

139. Out of 4 numbers, whose average is 60, the first one is one-fourth of the sum of the last three. The first number is

(A) 15 (B) 45
(C) 48 (D) 60

140. The average of 25 observations is 13. It was later found that an observation 73 was wrongly entered as 48. The new average is

(A) 12.6 (B) 14
(C) 15 (D) 13.8

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141. If the cost price of 10 articles is equal to the selling price of 8 articles, then gain per cent is

(A) 10% (B) 8%
(C) 50% (D) 25%

142. An article is marked 40% above the cost price and discount of 30% is allowed. What is the gain or loss percentage?

(A) 10 % gain
(B) 5% gain
(C) 2% loss
(D) 12% loss

143. A main bought oranges at the rate of 8 for Rs. 34 and sold them at the rate of 12 for Rs. 57. How many oranges should be sold to earn a net profit or Rs. 45?

(A) 90 (B) 100
(C) 135 (D) 150

144. A man sells two articles for Rs. 5000 each neither losing nor gaining in the deal. If he sold of them at a gain of 25%, the other article is sold at a loss of

(A) $15\frac{2}{3}\%$ (B) $16\frac{2}{3}\%$

(C) $17\frac{1}{3}\%$ (D) $18\frac{1}{3}\%$

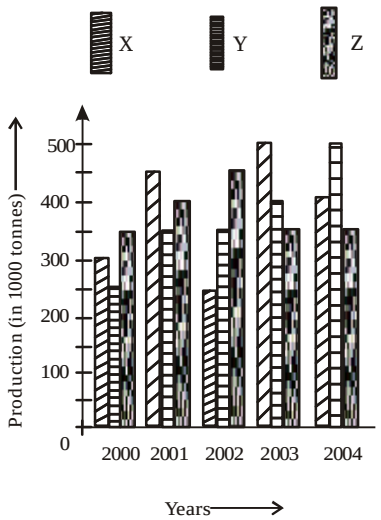
145. By selling an article for Rs. 144, a person gained such that the percentage gain equals the cost price of the article. The cost price of the article is

(A) Rs. 90 (B) Rs. 80
(C) Rs. 75 (D) Rs. 60

146. The average age of 11 players of a cricket team is increased by 2 months when two of them aged 18 years and 20 years are replaced by two new players. The average age of the new players is

(A) 19 years 1 month
(B) 19 years 6 month
(C) 19 years 11 month
(D) 19 years 5 month

The following graph shows the production of wheat flour (in 1000 tonnes) by three companies X, Y and Z over the years. Study the graph and answer Question Nos. 147 to 150.



147. What is the different between the production of company Z in 2004 and company Y in 2000 (in thousand tonnes)?

(A) 2000 (B) 200
(C) 20 (D) 100

148. What is the ratio of the average production of Company X in the period 2002-2004 to the average production of company Y in the same period?

(A) 1 : 1 (B) 15 : 17
(C) 23 : 25 (D) 27 : 29

149. What is the percentage increase in the production of company Y from 2002 to 2003?

(A) $14\frac{2}{7}$ (B) $16\frac{6}{7}$
(C) 25 (D) 40

150. The average production for five years was maximum for which company?

(A) X and Z both (B) Y
(C) Z (D) X and Y both

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ANSWER SHEET

101.	(b)	102.	(b)	103.	(a)	104.	(b)	105	(a)	106	(c)	107	(b)	108	(b)	109	(b)	110	(c)
111	(a)	112	(b)	113	(d)	114	(b)	115	(b)	116	(d)	117	(b)	118	(a)	119	(d)	120	(c)
121	(c)	122	(c)	123	(c)	124	(c)	125	(c)	126	(c)	127	(a)	128	(c)	129	(b)	130	(b)
131	(d)	132	(b)	133	(d)	134	(b)	135	(c)	136	(b)	137	(b)	138	(d)	139	(c)	140	(b)
141	(d)	142	(c)	143	(a)	144	(b)	145	(b)	146	(c)	147	(d)	148	(c)	149	(a)	150	(a)

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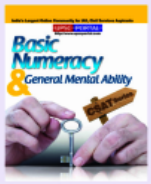

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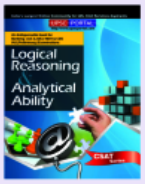

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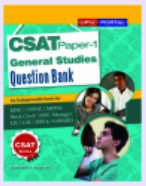

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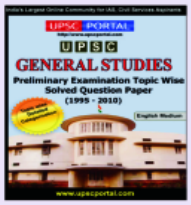

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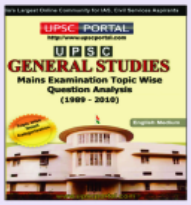

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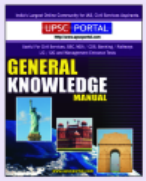

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