

**SOLVED PAPER**  
**SSC (10+2) LEVEL**  
**DATA ENTRY OPERATOR & LDC EXAM**

First Sitting

Held on : 11.12.2011

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

101. From each of the two given unequal numbers, half the smaller number is subtracted. Then, of the resulting numbers, the larger one is five times than the smaller one. Then the ratio of the larger to smaller one is  
(a) 2 : 1                      (b) 3 : 2  
(c) 3 : 1                      (d) 1 : 4
102. The largest number among  $\sqrt{2}, \sqrt[3]{3}, \sqrt[4]{4}$  is  
(a)  $\sqrt{2}$                       (b)  $\sqrt[3]{3}$   
(c)  $\sqrt[4]{4}$                       (d) All are equal
103. A got married 8 years ago. A's present age is  $1\frac{1}{4}$  times his age at the time of marriage.  
A's son's age is  $\frac{1}{10}$  times his present age.  
His son's age in years, is  
(a) 2                              (b) 3  
(c) 4                              (d) 5
104. When an integer K is divided by 3, the remainder is 1, and when K + 1 is divided by 5, the remainder is 0. Of the following, a possible value of K is  
(a) 62                              (b) 63  
(c) 64                              (d) 65
105. A farmer has 945 cows and 2475 sheep. He farms them into flocks, keeping cows and sheep separate and having the same number of animals in each flock. If these flocks are as large as possible, then the maximum number of animals in each flock and total number of flocks required for the purpose are respectively  
(a) 15 and 228  
(b) 9 and 380  
(c) 45 and 76                      (d) 46 and 75
106. The number of sides in two regular polygons are in the ratio 5 : 4 and the difference between each interior angle of the polygons is  $6^\circ$ . Then the number of sides are  
(a) 15, 12                      (b) 5A  
(c) 10, 8                              (d) 20, 16

107. If the length of each side of a regular tetrahedron is 12 cm, then the volume of the tetra-hedron is  
 (a) 144  $\sqrt{2}$  cu. cm. (b) 72  $\sqrt{2}$  cu. cm.  
 (c) 8, cu. cm. (d) 12  $\sqrt{2}$  cu. cm.
108. If the radii of the circular ends of a truncated conical bucket which is 45cm high be 28 cm and 7 cm, then the capacity of the bucket in cubic centimetre is uses  $\left( use\ p = \frac{22}{7} \right)$   
 (a) 48510 (b) 45810  
 (c) 48150 (d) 48051
109. A cone, a hemisphere and a cylinder stand on equal base and have the same height. Their volumes are in the ratio  
 (a) 1: 3: 2 (b) 2: 3: 1  
 (c) 1: 2: 3 (d) 3: 1: 2
110. A metal wire when bent in the form of a square encloses an area 484  $\text{cm}^2$ . If the same wire is bent in the form of a circle, then  
 (taking  $x = p = \frac{22}{7}$ ) its area is  
 (a) 308  $\text{cm}^2$  (b) 506  $\text{cm}^2$   
 (c) 600  $\text{cm}^2$  (d) 616  $\text{cm}^2$
111. Sides of a parallelogram are in the ratio 5 : 4. Its area is 1000 sq. units. Altitude on the greater side is 20 units. Altitude on the smaller side is  
 (a) 30 units (b) 25 units  
 (c) 10 units (d) 15 units
112. A circus tent is cylindrical up to a height of 3 m and conical above it. If its diameter is 105m and the slant height of the conical part is 63 m, then the total area of the canvas required to make the tent is  
 (take  $p = \frac{22}{7}$ )  
 (a) 11385  $\text{m}^2$  (b) 10395  $\text{m}^2$   
 (c) 9900  $\text{m}^2$  (d) 990  $\text{m}^2$
113. B and C can complete a piece of work in 12 days, C and A can do it in 8 days. All the three can do it in 6 days. A and B together can complete it in  
 (a) 4 days (b) 6 days  
 (c) 8 days (d) 10 days
114. A can do a work in 9 days, if B is 50% more efficient than A, then in how many days can B do the same work?  
 (a) 13.5 (b) 4.5  
 (c) 6 (d) 3
115. The successive discounts of 10% and 20% are equivalent to a single discount of  
 (a) 30% (b) 28%  
 (c) 25% (d) 27%
116. A dealer marks his goods at 40% above the cost price and allows a discount of 20% on the marked price. The dealer has a  
 (a) loss of 20% (b) gain of 25%  
 (c) loss of 12% (d) gain of 12%
117. If 120% of a is equal to 80% of b, then  $\frac{b+a}{b-a}$  is equal to  
 (a) 5 (b) 6  
 (c) 7 (d) 8
118. The ratio of spirit and water in two mixtures of 20 litre and 36 litre is 3 : 7 and 7 : 5 respectively. Both the mixtures are mixed together. Now the ratio of the spirit and water in the new mixture is  
 (a) 25: 29 (b) 9 : 10  
 (c) 27: 29 (d) 27: 31
119. The average of  $n$  numbers  $x_1, \dots, x_n$  is  $\bar{x}$ . Then the value of  $\sum_{i=1}^n (x_i - \bar{x})$  is equal to  
 (a)  $n$  (b) 0  
 (c)  $n\bar{x}$  (d)  $\bar{x}$
120. The average of six numbers is 32. If each of the first three numbers is increased by 2 and

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- each of the remaining three numbers is decreased by 4, then the new average is  
 (a) 35 (b) 34  
 (c) 31 (d) 30
121. The cost price : selling price of an article is  $a : b$ . If  $b$  is 200% of  $a$  then the percentage of profit on cost price is  
 (a) 75% (b) 125%  
 (c) 100% (d) 200%
122. A person sells 400 mangoes at the cost price of 320 mangoes. His percentage of loss is  
 (a) 10 (b) 15  
 (c) 20 (d) 25
123. A person ordered 4 shirts of brand  $A$  and some shirts of brand  $B$ . The price of one shirt of brand  $A$  was twice that of brand  $B$ . When the order was executed, it was found that the numbers of the two brands has been interchanged. This increased the bill by 40%. The ratio of the number of brand  $A$  shirts to that of brand  $B$  shirts in the original order was  
 (a) 1 : 2 (b) 1 : 3  
 (c) 1 : 4 (d) 1 : 5
124. A litre of pure alcohol is added to 6 litres of 30% alcohol solution. The percentage of water in the solution is  
 (a) 50% (b) 65%  
 (c) 60% (d) 40%
125. A man can row 30 km down-stream and return in a total of 8 hours. If the speed of the boat in still water is four times the speed of the current, then the of the speed current is  
 (a) 1 km/hour (b) 2 km/hour  
 (c) 4 km/hour (d) 3 km/hour
126. The difference between the simple and compound interest on a certain sum of money for 2 years at 4% per annum is Rs.1. Find the sum.  
 (a) Rs. 630 (b) Rs. 620  
 (c) Rs. 625 (d) Rs. 635
127. If  $x^2 + 2 = 2x$ , then the value of  $x^4 - x^3 + x^2 + 2$  is  
 (a) 0 (b) 1  
 (c) -1 (d)  $\sqrt{2}$
128. If  $2^x = 3^y = 6^{-z}$  then  $\left(\frac{1}{x} + \frac{1}{y} + \frac{1}{z}\right)$  is equal to  
 (a) 0 (b) 1  
 (c)  $\frac{3}{2}$  (d)  $-\frac{1}{2}$
129. If  $\frac{1}{x+y} = \frac{1}{x} + \frac{1}{y}$  ( $x \neq 0, y \neq 0, x \neq y$ ) then, the value of  $x^3 - y^3$  is  
 (a) 0 (b) 1  
 (c) -1 (d) 2
130. For real  $a, b, c$  if  $a^2 + b^2 + c^2 - ab + bc + ca$ , then value of  $\frac{a+c}{b}$  is  
 (a) 1 (b) 2  
 (c) 3 (d) 0
131. If  $x = a(b-c), y = b(c-a)$  and  $z = c(a-b)$ , then  

$$\left(\frac{x}{a}\right)^3 + \left(\frac{y}{b}\right)^3 + \left(\frac{z}{c}\right)^3 =$$
 (a)  $\frac{xyz}{3abc}$  (b)  $3xyzabc$   
 (c)  $\frac{3xyz}{abc}$  (d)  $\frac{xyz}{abc}$
132. In a quadrilateral  $ABCD$ , with unequal sides if the diagonals  $AC$  and  $BD$  intersect at right angles, then  
 (a)  $AB^2 + BC^2 = CD^2 + DA^2$   
 (b)  $AB^2 + CD^2 = BC^2 + DA^2$   
 (c)  $AB^2 + AD^2 = BC^2 + CD^2$   
 (d)  $AB^2 + BC^2 = 2(CD^2 + DA^2)$
133. The tangents are drawn at the extremities of a diameter  $AB$  of a circle with centre  $P$ . If a

tangent to the circle at the point C intersects the other two tangents at G and R, then the measure of the  $\angle QPR$  is

- (a)  $45^\circ$  (b)  $60^\circ$   
 (c)  $90^\circ$  (d)  $180^\circ$
134. Let O be the in-centre of a triangle ABC and D be a point on the side BC of  $\triangle ABC$ , such that  $OD \perp BC$ . If  $\angle BOD = 15^\circ$ , then  $\angle ABC =$   
 (a)  $75^\circ$  (b)  $45^\circ$   
 (c)  $150^\circ$  (d)  $90^\circ$
135. AB is a chord to a circle and PAT is the tangent to the circle at A. If  $\angle BAT = 75^\circ$  and  $\angle BAC = 45^\circ$ , C being a point on the circle, then  $\angle ABC$  is equal to  
 (a)  $40^\circ$  (b)  $45^\circ$   
 (c)  $60^\circ$  (d)  $70^\circ$
136. D is any point on side AC of  $\triangle ABC$ . If P, Q, X, Y are the midpoints of AB, BC, AD and DC respectively, then the ratio of PX and QY is  
 (a) 1 : 2 (b) 1 : 1  
 (c) 2 : 1 (d) 2 : 3

137. If  $2\cos\theta - \sin\theta = \frac{1}{\sqrt{2}}$  ( $0^\circ < \theta < 90^\circ$ ) the value of  $2\sin\theta + \cos\theta$  is

- (a)  $\frac{1}{\sqrt{2}}$  (b)  $\sqrt{2}$   
 (c)  $\frac{3}{\sqrt{2}}$  (d)  $\frac{\sqrt{2}}{3}$

138. If  $\frac{\sin\theta + \cos\theta}{\sin\theta - \cos\theta} = 3$ , then the value of  $\sin^4\theta - \cos^4\theta$  is

- (a)  $\frac{1}{5}$  (b)  $\frac{2}{5}$   
 (c)  $\frac{3}{5}$  (d)  $\frac{4}{5}$

139. The value of  $\tan 1^\circ \cdot \tan 3^\circ \cdot \tan 4^\circ \dots \tan 87^\circ \cdot \tan 88^\circ \cdot \tan 89^\circ$  is

- (a)  $\frac{1}{\sqrt{3}}$  (b)  $\sqrt{3}$   
 (c) 1 (d) undefined

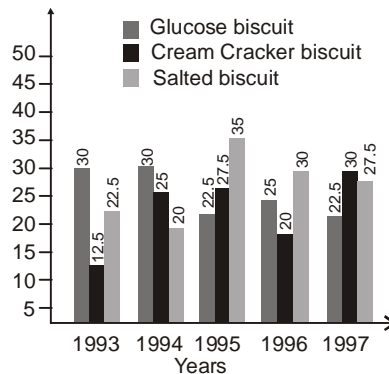
140. Two poles of equal heights are standing opposite to each other on either side of a road which is 100m wide. From a point between them on road, angles of elevation of their tops are  $30^\circ$  and  $60^\circ$ . The height of each pole in metre, is

- (a)  $25\sqrt{3}$  (b)  $20\sqrt{3}$   
 (c)  $28\sqrt{3}$  (d)  $30\sqrt{3}$

141. If  $\sec^2\theta + \tan^2\theta = 7$ , then the value of  $\theta$  when  $0^\circ \leq \theta \leq 90^\circ$  is

- (a)  $60^\circ$  (b)  $30^\circ$   
 (c)  $0^\circ$  (d)  $90^\circ$

**Directions (142-146):** The bar diagram given below shows the productions (in the unit of thousand pieces) of three types of biscuits by a company in the five consecutive years. Study the diagram and answer the following questions 142 to 146



142. The percentage drop in the number of glucose biscuits manufactured from 1994 to 1995 is

- (a) 10 (b) 15  
 (c) 25 (d) 20

143. The difference (in the unit of thousand pieces) between the total number of cream cracker biscuits manufactured in the years

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- 1993, 1995 and 1997 and the total number of the biscuits of same type in the years 1994 and 1996 is  
 (a) 15 (b) 25  
 (c) 30 (d) 20
144. Total production of all the three types of biscuits was the least in the year  
 (a) 1993 (b) 1997  
 (c) 1996 (d) 1995
145. The production of all the three types of biscuits was maximum in the year  
 (a) 1995 (b) 1994  
 (c) 1996 (d) 1993
146. The ratio of production of glucose biscuits and total production of biscuits in that year was maximum in  
 (a) 1994 (b) 1993  
 (c) 1996 (d) 1997

**Directions (147-150) :** Study the following table which shows the number of students appeared and passed in different streams in a University and answer the questions given below it

Year	Engineering		Medical		Management		Commerce	
	App eared	Pass	App eared	Pass	App eared	Pass	App eared	Pass
2001	324	289	469	246	96	69	1467	1310
2002	356	312	430	364	74	62	1246	1129
2003	284	212	384	326	124	102	1387	1176
2004	310	246	395	298	106	92	1180	1074
2006	380	286	466	405	78	63	1375	1207

147. Approximately what per cent of students appearing in medical, passed in 2003 ?  
 (a) 75% (b) 85%  
 (c) 78% (d) 88%
148. Approximately what per cent of total students appearing in 2004, appeared in commerce stream?  
 (a) 55.3% (b) 64.4%  
 (c) 52.5% (d) 59.3%
149. The number of students appearing in all streams was minimum in the year  
 (a) 2002  
 (b) 2003  
 (c) 2004  
 (d) 2006
150. The number of students passing in all streams was maximum in the year.  
 (a) 2001 (b) 2005  
 (c) 2006 (d) 2004

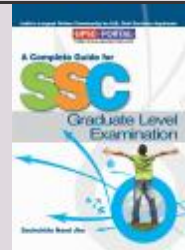
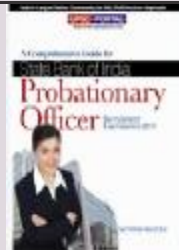
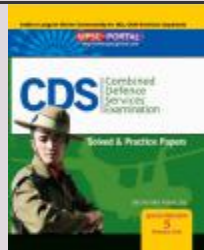
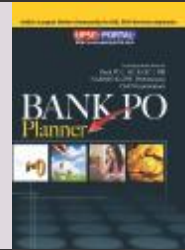
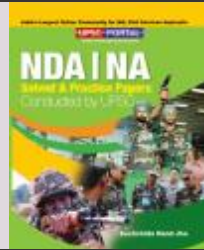
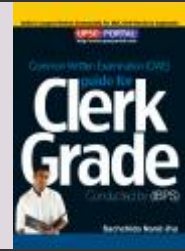
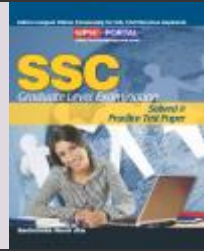
**ANSWERS**

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

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