| 1.2 | 2.5 | 3.3 | 4.2 | 5.2 |
| ---: | ---: | ---: | ---: | ---: |
| 6.3 | 7.3 | 8.3 | 9.1 | 10.2 |
| 11.3 | 12.5 | 13.2 | 14.5 | 15.1 |
| 16.2 | 17.1 | 18.3 | 19.2 | 20.4 |
| 21.1 | 22.3 | 23.1 | 24.4 | 25.4 |
| 26.3 | 27.5 | 28.3 | 29.1 | 30.2 |
| 31.1 | 32.2 | 33.5 | 34.2 | 35.5 |
| 36.4 | 37.1 | 38.3 | 39.3 | 40.2 |
| 41.1 | 42.4 | 43.1 | 44.4 | 45.1 |
| 46.2 | 47.5 | 48.2 | 49.4 | 50.3 |
| 51.2 | 52.5 | 53.5 | 54.3 | 55.5 |
| 56.2 | 57.3 | 58.3 | 59.2 | 60.4 |
| 61.1 | 62.5 | 63.3 | 64.5 | 65.1 |
| 66.3 | 67.4 | 68.4 | 69.4 | 70.2 |
| 71.1 | 72.3 | 73.4 | 74.4 | 75.5 |
| 76.2 | 77.2 | 78.2 | 79.1 | 80.3 |
| 81.3 | 82.2 | 83.1 | 84.2 | 85.3 |
| 86.2 | 87.4 | 88.1 | 89.3 | 90.5 |
| 91.4 | 92.1 | 93.2 | 94.2 | 95.1 |
| 96.5 | 97.4 | 98.4 | 99.3 | 100.4 |

110. 1; In 2009 , profit is $100 \%$ as $\frac{E}{I}=0.5=\frac{5}{10}$
$\%$ profti $=100 \%$
In 2010, profit $=\frac{20}{80} \times 100=25 \%$
$\therefore \%$ decrease $=\frac{100-25}{100} \times 100=75 \%$
111. 2; $\quad \frac{0.9-0.75}{0.75} \times 100=20 \%$
112. 4; We can't find the answer by the given data.
$\frac{\text { Import of } \mathrm{A}}{\text { Export of } \mathrm{A}}=1.2 ;$ Import of $\mathrm{A}=60$ lakhs
$\frac{\text { Import of } B}{\text { Export of } B}=0.9$; Export of $B=50$ lakhs
$\therefore$ Import ofB $=0.9 \times 50=45$ lakhs
113. 2; It is $\frac{58}{67} \times 100=86.56 \%$
114. 4; Difference $=371-328=43$
115. 5; $\%$ increase $=\frac{5}{60} \times 100=8.33 \%$
116. 4; Ratio $=\frac{108}{126}=\frac{6}{7}=6: 7$
117. 5; Number of tyre sold in $2008=50$

Number of tyre sold in 2012 $=65$
$\therefore \%=\frac{65-50}{50} \times 100=30 \%$
106. 4; To be maximum profit ratio $\frac{E}{I}$ should be minimum.

So in 2011, it is 0.3.
107. 4
108. 2; $\because$ For 2008 and 2012, $\frac{E}{I}=0.8$

So we can find the income $=\frac{60}{0.8}=75$ lakhs
109. 2; $\because$ In 2009, ratio $\frac{E}{I}=0.5$
$\therefore \mathrm{I}=2 \mathrm{E}$
ie profit is $100 \%$.

## BSC Academy

118. 1; Profit = Profit of E on Item I + Profit of D of Item II

$$
\begin{aligned}
& =5000 \times 80000\left[\left(\frac{36}{360} \times \frac{4}{5} \times \frac{30}{100}\right)+\left(\frac{54}{360} \times \frac{2}{5} \times \frac{25}{100}\right)\right] \\
& =1.56 \text { crore }
\end{aligned}
$$

119. 4; Ratio $=\frac{5000 \times 80000 \times \frac{90}{360} \times \frac{3}{5}}{5000 \times 80000 \times \frac{36}{360} \times \frac{4}{5}}=\frac{45}{24}=15: 8$
120. 2; Production cost of Item II of Company E

$$
=5000 \times 80000 \times \frac{36}{360} \times \frac{1}{5}=8000000
$$

Production cost of Item I of Company A

$$
=5000 \times 80000 \times \frac{90}{360} \times \frac{2}{5}=40000000
$$

$$
\therefore \%=\frac{8000000}{40000000} \times 100=20 \%
$$

121. 2; Expenditure $=\frac{\text { Income } \times 100}{100+60}=\frac{40 \times 100}{160}$

$$
=\text { Rs } 25 \text { lakhs }
$$

122. $5 ; \quad$ Income $=57 \times\left(\frac{100+40}{100}\right)=$ Rs 79.8 lakhs
123. 5
124. 2; $\%$ profit $=\frac{\text { Profit }}{\text { Expenditure }} \times 100$
$\therefore$ Expenditure $=\frac{100 \times 9}{30}=$ Rs 30 lakhs
$\therefore$ income $=30+9=$ Rs 39 lakhs
125.3; Required ratio $=\frac{100+60}{100+40}=\frac{160}{140}=\frac{8}{7}=8: 7$
125. 4
126. 2; In Computer Science total students is 240 and girls are 90 .

$$
\therefore \%=\frac{3}{8} \times 100=37.5 \%
$$

128. 5; $\quad$ Number of boys $=993$, Number of girls $=807$
$\therefore$ Difference $=993-807=186$
129. 4; Required $\%=\frac{5-3}{3} \times 100=66 \frac{2}{3} \%$
130.3; Ratio $=\frac{186}{192}=\frac{31}{32}=31: 32$
130. 2
132.1; Ratio $=\frac{40}{8}=\frac{5}{1}=5: 1$
131. 4
132. 2
133. 5; Total population $=80$ lakhs

Number of people in government job $=8$ lakhs
$\therefore \%=\frac{8 \times 100}{80}=10 \%$
136.4; Number of items sold by Unit B in $2009=6355200$

Number of items sold by Unit D in 2009 $=17763200$
Total $=24118400$
137. 1; Required percentage $=\frac{131 \times \frac{1.5}{100}}{169 \times \frac{1.8}{100}} \times 100=65 \%$
138. 3; Highest in year 2013.
139. 2
140. 5
(141-145):

(146-150):

|  | Male |  | Female |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Adult | Children | Adult | Children |
| Kapoor | 5 | 3 | 3 | 1 |
| Khanna | 5 | 5 | 3 | 2 |

146. $2 ;{ }^{10} \mathrm{C}_{10} \times{ }^{6} \mathrm{C}_{2}=1 \times \frac{6 \times 5}{2}=15$
147. 1; ${ }^{8} \mathrm{C}_{2} \times{ }^{4} \mathrm{C}_{2} \times{ }^{8} \mathrm{C}_{2} \times{ }^{7} \mathrm{C}_{2}=98784$
148. 1; ${ }^{3} \mathrm{C}_{2} \times{ }^{8} \mathrm{C}_{2} \times{ }^{6} \mathrm{C}_{2}=1260$
149. $4 ; \quad \frac{1}{4} \times \frac{1}{7}=\frac{1}{28}$
150.3; $\frac{{ }^{8} \mathrm{C}_{1} \times{ }^{10} \mathrm{C}_{2}}{{ }^{18} \mathrm{C}_{3}}=\frac{8 \times 45 \times 6}{17 \times 17 \times 16}=\frac{15}{34}$
(151-155):
Anna is great social activist of India $\rightarrow$ bee lee nee yee jee pee tee ... (i)
India is great country $\rightarrow$ pee lee yee dee
corruption free country $\rightarrow$ oee dee vee ... (iii)
Anna is old $\rightarrow$ jee lee fee
remove corruption India $\rightarrow$ vee pee loo ... (v)
From (ii) and (iii), country $\rightarrow$ dee $\ldots$ (vi)
From (iii) and (v), corruption $\rightarrow$ vee $\ldots$ (vii)
From (iii), (vi) and (vii), free $\rightarrow$ oee $\ldots$ (viii)
From (ii) and (v), India $\rightarrow$ pee ... (ix)
From (ii) and (iv), is $\rightarrow$ lee ...(x)
From (ii), (vi), (ix) and (x)
great $\rightarrow$ yee
From (v), (vii) and (ix)
remove $\rightarrow$ loo
From (i), (iv) and (x)
Anna $\rightarrow$ jee
From (iv), (x) and (xii)
old $\rightarrow$ fee
Again, from (i)
social $\rightarrow$ nee, bee or tee
activist $\rightarrow$ bee, nee or tee
of $\rightarrow$ tee, nee or bee
$\begin{array}{lllll}151.3 & 152.4 & 153.2 & 154.5 & 155.4\end{array}$
156.5; All the groups of letters contain vowels in small letters and consonants in capital letters.. Except option [5].
157.5; All the groups have letters followed by numbers which are their positions in alphabetical series. Except [5]. Because the position of ${ }^{\prime} P$ ' in alphabetical series is 16 .
158.5; From I


From II. ${ }^{\text {D }}(-)$

$$
\begin{aligned}
& \stackrel{\rightharpoonup}{\downarrow}(-) \\
& (+)_{\mathrm{A}}-\mathrm{B}(+)-\mathrm{C}
\end{aligned}
$$

So, A is brother of C , not cousin.
From III. D(-)


From the above tree, it is clear that A is not cousin of C. A is uncle of C .

From IV. ${ }^{(+)} \mathrm{C}-\underset{\mathrm{P}}{\downarrow}{ }^{\downarrow}+$
$\mathrm{Q}(-)-\mathrm{A}$
C is uncle of A , not cousin.
159.3; A (+)

$T$ should be father of $O$.
So ' $x$ ' will come in place of question mark.
160.2; Check for I. $\quad \mathrm{T} \frac{\text { brother }^{U}}{} \mathrm{~V}$

So, T is brother of V .


Check for II. So, T is maternal uncle of V .
There is no need to check further.
$\begin{array}{lllll}161.1 & 162.5 & 163.4 & 164.1 & 165.4\end{array}$
(166-170):


Tallest $B-E-F-A-H-G-C-D$ Shortest

| 166.2 | 167.1 | 168.2 | 169.5 | 170.4 |
| :--- | :--- | :--- | :--- | :--- |


| 171.2 | 172.5 | 173.3 | 174.4 | 175.4 |
| :--- | :--- | :--- | :--- | :--- |

176. 2; From I: V_T C_R
...........
175.4
(a)
or $\mathrm{V}_{-} \mathrm{CT}$ _R
or, _V_CT_R ............ (c)
or, _V_TC_R
From II: IC
O_Y.
(a)

Neither IR nor RI
(b)

From III. IRO or ROI
(c)

I (a) is ruled out by II (a)
I (d) is ruled out by II (a), (c)
I (c) is ruled out by II (c)
Thus, from I (b) and II (a) (b)
VICTORY
Hence, V I C T O R Y is the word.
From I and II: Thus, word is VICTORY
177.5; From I: rainy season is too beautiful
$\rightarrow$ lo ke pe zo go
climate too cool $\quad \rightarrow$ ke al me
$\therefore$ too $\rightarrow$ ke
From II: winter season is chilling

$$
\rightarrow \text { zo go ye te }
$$

winter chilling $\rightarrow$ te ye
winter $\rightarrow$ 'te' or 'ye'
chilling $\quad \rightarrow$ 'ye' or 'te'
From III: enjoy the weather $\rightarrow$ be ce da
weather are beautiful $\rightarrow$ da fe pe
$\therefore$ weather $\quad \rightarrow$ da

## From I (a) and II (a):

rainy season is too beautiful $\quad \rightarrow$ lo ke pe zo
winter season is chilling $\rightarrow$ zo go ye te
season $\rightarrow$ 'go' or 'zo'
is $\quad \rightarrow$ ' zo ' or ' go '
Thus, the question cannot be answered even with the help of I, II and III
178.2; FromI.


From II.

179. 1; From I. 14th, 15th, 16th or 18th August.

From II. According to Anjali brother, her father's
birthday is on 16th, 17th in month of August.
From III. Anjali's father's birthday falls on even date.
From II and III.
Father's birthday is 16th August.
180.2; From I. Monday - $\mathrm{O}(\times)$

Tuesday - P
Wednesday - P
FromII. Saturday-Q
Tuesday - M
From III. Play N is organised on the next day of O.
From I, II and III.
Monday - R
Tuesday - M
Wednesday - P

Thursday - O
Friday-N
Saturday - Q
Thus, N was staged on Friday. All are sufficient to answer the question.
181. 5
182. 4; It is given that rice cultivated in Punjab of premium quality is what the government is trying to export. This implies quality gets preference in export.

| 183.4 | 184.2 | 185.2 | 186.1 | 187.1 |
| :--- | :--- | :--- | :--- | :--- |
| 188.1 | 189.4 | 190.2 | 191.5 | 192.5 |
| 193.3 | 194.2 | 195.4 |  |  |

196.2; The whole figure rotates by $90^{\circ} \mathrm{ACW}$. The shaded ball moves inside after two steps and comes out in the next. The circle and plus move inside and outside in each step.
197.1; The half-shaded square rotates by $90^{\circ} \mathrm{CW}$ in each step while $1,4,3,4,1 \ldots$ parts of the other square get shaded in subsequent steps. The arc rotates by $90^{\circ}$ CW in each step. The whole figure rotates by $90^{\circ}$ ACW.
198.3; The ACW-end element remains static. The second from CW end shifts one side CW. The other three move one-and-a-half sides ACW while the second from the ACW end is replaced by a new one in alternate steps.
199. 3; The arrow rotates by $45^{\circ} \mathrm{ACW}, 45^{\circ} \mathrm{ACW}, 90^{\circ} \mathrm{CW}$, $45^{\circ} \mathrm{ACW}, \ldots$ in subsequent steps and moves two steps ACW. The semilunar element moves diagonally. For others follow if $1=4,2=5$ then $3=6$ rule.
200. 2; In alternate steps a bar and an arrowhead is added while the existing arrows get inverted vertically and laterally.

