## UP SI MOCK TEST - 55 (SOLUTION)

81. (B) A.T.Q.,

Let the number is $=100$

13.75 units $\rightarrow 22$

1 units $\rightarrow \frac{22}{13.75}$
100 units $\rightarrow \frac{22}{13.75} \times 100=160$
$\therefore$ Original number $=160$
82. (D) A.T.Q.,

CP of 1 pen = ₹50
CP of 50 pen $=₹ 50 \times 50=₹ 2500$
to gain $10 \%$ overall sold at $=2750$
Now, 40 pen sold at $5 \%$ loss
$\therefore \mathrm{SP}$ of 50 pen $=40 \times 47.5=₹ 1900$
Remaining 10 pens sold to get overall profit of $10 \%$ at ₹ 850
SP of 1 (remaining pen) $\frac{850}{10}=₹ 85$
CP of 1 pen = ₹ 50
Profit percent remaining pen
$=\frac{35}{50} \times 100=70 \%$
83. (B) Curved surface area of cylinder $=264$ $2 \pi r h=264$
$2 \times \frac{22}{7} r h=264$
$r h=42$
Volume of cylinder $=924$
$\pi r^{2} h=924$
$\frac{22}{7} \times r \times r h=924$
$\frac{22 \times r \times 42}{7}=924$
$r=7 \mathrm{~m}$
$7 \times h=42$
$h=6 \mathrm{~cm}$
Diameter : height
= 14:6 = 7:3
84. (C) Distance $=384 \mathrm{~km}$

If the speed is decreased by $16 \mathrm{~km} / \mathrm{h}$ taken time 2 hours more to cover the same distance.

| Speed | Time |
| :---: | :---: |
| 16 | 2 |
| 32 | 4 |
| 48 | 6 |
| $64 \longleftrightarrow$ | 8 |

$\therefore 64$ of $75 \%=64 \times \frac{3}{4}=48 \mathrm{~km} / \mathrm{h}$
85. (C) $\tan ^{2} \alpha=1+2 \tan ^{2} \beta$ (Using identity)
$\Rightarrow \sec ^{2} \alpha-1=1+2\left(\sec ^{2} \beta-1\right)$
$\Rightarrow \sec ^{2} \alpha-1=1+2 \sec ^{2} \alpha-2$
$\Rightarrow \sec ^{2} \alpha-1=2 \sec ^{2} \beta-1$
$\Rightarrow \sec ^{2} \alpha=2 \sec ^{2} \beta$
$\Rightarrow \sec \alpha=\sqrt{2} \sec \beta$
$\Rightarrow \frac{1}{\cos \alpha}=\sqrt{2}\left(\frac{1}{\cos \beta}\right)$
$\Rightarrow \cos \beta=\sqrt{2} \cos \alpha$
$\Rightarrow \sqrt{2} \cos \alpha-\cos \beta=0$
86. (D) As we know,
$a^{3}+b^{3}+c^{2}-3 a b c=(a+b+c)\left\{(a+b+c)^{2}\right.$
$-3(a b+b c+c a)\}$
$a^{3}+b^{3}+c^{3}-3 a b c=(6)(36-3 \times 4)$
$=6(36-12)$
$=6 \times 24=144$
87. (A) Share of son : Wife : Daughter are

| S | $:$ | W | $:$ |
| :---: | :---: | :---: | :---: |
| 3 | $:$ | D |  |
|  |  | $:$ |  |
| 9 | 3 | $:$ | 1 |
| 9 | 3 | $:$ | 1 |

Total $\Rightarrow 9 x \div 3 x \div x=13 x$
$=$ Share of son $=9 x$
Share of daughter $=x$
Difference between share of son and share of daughter
$9 x-x=8 x=1000$

$$
x=₹ 1250
$$

$\therefore$ Total property $=13 x$
$=13 \times 1250=₹ 16250$
88. (B)
$\left[\frac{m_{1} \times h_{1} \times T_{1}}{W_{1}}=\frac{m_{2} \times h_{2} \times T_{2}}{W_{2}}\right]$
$9_{\text {taps }} \times 20_{\text {mins }}=\times 15_{\text {mins }}$
$\mathrm{T}=12$ taps.
89. (C)



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In $\triangle \mathrm{ABC}$,
$\cot \phi=\frac{B C}{\mathrm{~h}}$
$\Rightarrow B C=h \cot \phi$
In $\triangle \mathrm{ABD}$,
$\cot \theta=\frac{B D}{\mathrm{~h}}$
$\Rightarrow \mathrm{BD}=h \cot \theta$
Required distance $=B D-B C$
$=h \cot \theta-h \cot \phi$
$=h(\cot \theta-\cot \phi) \mathrm{m}$
90. (C)

$\mathrm{AR}=\mathrm{AQ}=4.5 \mathrm{~cm}$
$B R=B P=6 \mathrm{~cm}$
$\mathrm{PC}=\mathrm{QC}=5.5 \mathrm{~cm}$
Then, $\mathrm{AB}=\mathrm{AR}+\mathrm{BR}=10.5 \mathrm{~cm}$
$\mathrm{BC}=\mathrm{BP}+\mathrm{PC}=11.5 \mathrm{~cm}$
$A C=A Q+Q C=10 \mathrm{~cm}$
So, The perimeter of $\triangle \mathrm{ABC}$
$=(A B+B C+A C)=32 \mathrm{~cm}$
91. (B) Ratio of efficiency of $A$ and $B$ $100: 160=5$ 8
A B
Ratio of time $=8: \quad 5$

| $\downarrow^{\times \frac{3}{2}}$ | $\downarrow^{\times \frac{3}{2}}$ |
| :--- | :--- |
| 12 | $\mathbf{7} \frac{\mathbf{1}}{\mathbf{2}}$ |

$\therefore$ B can do the work in $=7 \frac{1}{2}$ days
92. (B)

$\Rightarrow$ Profit of $C=\frac{3 \times 2400}{6}=₹ 1200$
93. (C) Average $=\frac{(2 \times 8)+(3 \times 3)}{2+3}=\frac{16+9}{5}$ $=\frac{25}{5}=5$
94. (A) A.T.Q.,

Let $\mathrm{BC}=2 x$, then $\mathrm{CA}=5 x$
$\therefore \mathrm{AB}=7 x$

$\angle \mathrm{ADC}=\angle \mathrm{CDB}=\theta$ and $\mathrm{BD}=14 \mathrm{~m}$
In $\triangle \mathrm{BDC}, \tan \theta=\frac{\mathrm{BC}}{\mathrm{BD}}=\frac{2 x}{14}=\frac{x}{7}$
In $\triangle \mathrm{ABD}, \tan 2 \theta=\frac{\mathrm{AB}}{\mathrm{BD}}=\frac{7 x}{14}=\frac{x}{2}$
$\Rightarrow \frac{2 \tan \theta}{1-\tan ^{2} \theta}=\frac{x}{2} \quad \Rightarrow \frac{2\left(\frac{x}{7}\right)}{1-\left(\frac{x}{7}\right)^{2}}=\frac{x}{2}$
$\Rightarrow \frac{2 x \times 7}{49-x^{2}}=\frac{x}{2} \Rightarrow 49-x^{2}=28$
$\Rightarrow x^{2}=21 \Rightarrow x=\sqrt{21}$
95. (B) In condition-I

Let the principal be $x$
Amount $=3 x$
$\therefore$ Interest $=2 x$
Time $=20$ years
$\therefore \mathrm{I}=\frac{\mathrm{PRT}}{100} \Rightarrow 2 x=\frac{x \times \mathrm{R} \times 20}{100}$
$\Rightarrow R=10 \%$
In condition-II
$\mathrm{I}=x$
$\mathrm{P}=x$
$\mathrm{R}=10$
$\mathrm{T}=$ ?
$\therefore \mathrm{I}=\frac{\mathrm{PRT}}{100} \Rightarrow x=\frac{x \times 10 \times \mathrm{T}}{100}$
$\therefore \mathrm{T}=10$ years
96. (A) $x^{2}-\frac{1}{x^{2}}=5$
$=\left[x^{6}-\frac{1}{x^{6}}-3\left(x^{2}-\frac{1}{x^{2}}\right)+1\right]$
$=\left[x^{6}-\frac{1}{x^{6}}-15+1\right]=x^{6}-\frac{1}{x^{6}}-14$
$=x^{2}-\frac{1}{x^{2}}=5=x^{6}-\frac{1}{x^{6}}-3 \times 5=125$
$=x^{6}-\frac{1}{x^{6}}=140=140-14=126$
97. (C)


$$
\frac{\mathrm{AB}}{\mathrm{AC}}=\frac{\mathrm{BD}}{\mathrm{DC}}=\frac{8}{12}=2: 3
$$

98. (B)

$2(\mathrm{I}+\mathrm{II}+\mathrm{III}+\mathrm{IV})$ Required time $=\frac{60}{12}=5 \mathrm{~min}$
(I + II + III + IV) Required time
$=5 \times 2=10 \mathrm{~min}$.
99. (B) $3^{10} \times 27^{2}=9^{2} \times 3^{n}$
$\Rightarrow 3^{10} \times 3^{6}=3^{4} \times 3^{n}$
$\Rightarrow 3^{10+6}=3^{4+n}$
$\Rightarrow 4+n=16$
$\Rightarrow n=12$
100. (D) $\left(5 \sqrt{5} x^{3}-81 \sqrt{3} y^{3}\right) \div(\sqrt{5} x-3 \sqrt{3} y)$
$=\left(A x^{2}+B y^{2}+C x y\right)$
$\Rightarrow \frac{(\sqrt{5} x-3 \sqrt{3} y)\left(5 x^{2}+27 y^{2}+3 \sqrt{15} \times y\right)}{(\sqrt{5} x-3 \sqrt{3} y)}$
$=\left(\mathrm{A} x^{2}+\mathrm{B} y^{2}+\mathrm{C} x y\right)$
$\Rightarrow 5 x^{2}+27 y^{2}+3 \sqrt{15} x y$
$=\mathrm{A} x^{2}+\mathrm{B} y^{2}+\mathrm{C} x y$
Compare on both sides
$\Rightarrow A=5, \Rightarrow B=27, \Rightarrow C=3 \sqrt{15}$
Putting the value of $A, B, C$ in
$=(6 \mathrm{~A}+\mathrm{B}-\sqrt{15} \mathrm{C})$
$=\{6(5)+27-3 \sqrt{15}(\sqrt{15})\}$
$=(30+27-45)=12$
101. (B)


Let $\mathrm{BC}=x, \mathrm{FB}=y=\mathrm{EF}=\mathrm{AE}$
$\therefore \mathrm{CD}=3 y$
Now-
$\operatorname{ar}(\Delta \mathrm{CBF})=\frac{1}{2} x y$
or, $\operatorname{ar}(\triangle \mathrm{CBE})=\frac{1}{2} x=2 y=x y$
$\therefore \operatorname{ar}(\triangle \mathrm{CEF})=x y-\frac{1}{2} x y$

$$
=\frac{1}{2} x y
$$

Now-
Area of rectangle $=3 x y$
$\therefore \frac{\operatorname{ar}(\triangle \mathrm{CEF})}{\operatorname{ar}(\square \mathrm{ABCD})}=\frac{1 \times x y}{2 \times 3 x y}=1: 6$.
102. (A) $\sin ^{2} 30^{\circ} \cos ^{2} 45^{\circ}+5 \tan ^{2} 30^{\circ}+\frac{3}{2} \sin ^{2}$
$90^{\circ}-3 \cos ^{2} 90^{\circ}$
$=\left(\frac{1}{2}\right)^{2} \times\left(\frac{1}{\sqrt{2}}\right)^{2}+5 \times\left(\frac{1}{\sqrt{3}}\right)^{2}+\frac{3}{2} \times 1-3 \times 0$
$=\frac{1}{4} \times \frac{1}{2}+5 \times \frac{1}{3}+\frac{3}{2}$
$=\frac{1}{8}+\frac{5}{3}+\frac{3}{2}=\frac{3+40+36}{24}$
$=\frac{79}{24}=3 \frac{7}{24}$
103. (D) Quantity of milk in the last
$=81\left(1-\frac{27}{81}\right)^{2}=81\left(1-\frac{1}{3}\right)^{2}$
$=81 \times \frac{2}{3} \times \frac{2}{3}=36$
Quantity of water in the last
$=81-36=45$
$\therefore$ Ratio $=\frac{36}{45}=\frac{4}{5}=4: 5$
104. (B) $q\left(p^{2}-1\right)$
$=(\sec \theta+\operatorname{cosec} \theta)\left\{(\sin \theta+\cos \theta)^{2}-1\right\}$
$=\left(\frac{1}{\cos \theta}+\frac{1}{\sin \theta}\right)\left\{\sin ^{2} \theta+\cos ^{2} \theta+2 \sin \theta \cos \theta-1\right\}$
$=\left(\frac{\sin \theta+\cos \theta}{\cos \theta \sin \theta}\right)(1+2 \sin \theta \cos \theta-1)$
$=\left(\frac{\sin \theta+\cos \theta}{\cos \theta \sin \theta}\right)(2 \sin \theta \cos \theta)$
$=2(\sin \theta+\cos \theta)=2 p$
105. (C) A.T.Q.,

Amount = ₹ 3144
Rate $=8 \%$

Let, principal $=₹ x$
Time
$=\frac{30+29+31+30+31+30+7}{366}=\frac{219}{366}$
$\therefore \mathrm{SI}=\frac{\mathrm{P} \times \mathrm{R} \times \mathrm{T}}{100}$
$3144-x=\frac{x \times 8 \times 219}{100 \times 366}=₹ 3000$
106. (B) Average speed $=\frac{2 \times 40 \times 60}{(60+40)}=48 \mathrm{~km} / \mathrm{hr}$

Total distance $=48 \times 10=480 \mathrm{~km}$
107. (C) Given $\angle \mathrm{OBC}=\angle \mathrm{OCB}=37^{\circ}$
$[\because$ Angles opposite to equal sides of a triangle are equal]
$\angle \mathrm{COB}=180^{\circ}-\left(37^{\circ}+37^{\circ}\right)=106^{\circ}$
$\therefore \angle \mathrm{BAC}=\frac{1}{2} \angle \mathrm{COB}=\frac{106^{\circ}}{2}=53^{\circ}$
108. (C) For 2 years

Difference between C.I. and S.I.
$\Rightarrow$ C.I. - S.I. $=P\left(\frac{\mathrm{R}}{100}\right)^{2}$
$\Rightarrow 63=\mathrm{P} \times\left(\frac{5}{100}\right)^{2}$
$\Rightarrow 63 \times 20 \times 20=P$
$\Rightarrow$ Principal $=$ ₹ 25200
Therefore P.A. = ₹ 25200
109. (C) AS AE is an exterior angle bisector

Let $\mathrm{CE}=x, \mathrm{BE}=\mathrm{BC}+\mathrm{EC}=12+x$
$\Rightarrow \frac{12+x}{x}=\frac{10}{6}$
$\Rightarrow(12+x) 6=10 x$
$\Rightarrow 72+6 x=10 x$
$\Rightarrow 4 x=72$
$\Rightarrow x=18 \mathrm{~cm}$
110. (B) $985 \times 3678 y$


Putting the value $x=y=4$ then, it is divisible by 72
$4 x-3 y=16-12=4$
111. (B) S.I. $=2641.20-1860=₹ 781.2$

Time $=\frac{\text { S.I. } \times 100}{\text { Principal } \times \text { Rate }}$
$=\frac{781.2 \times 100}{1860 \times 12}=3 \frac{1}{2}$ years
112. (B) Distance covered by wheel in one revolution
= Circumference of wheel
$\therefore \pi \times$ diameter $=\frac{440}{1000}$
$\Rightarrow \frac{22}{7} \times$ diameter $=\frac{440}{1000}$
$\Rightarrow$ Diameter $=\frac{440}{1000} \times \frac{7}{22}=0.14 \mathrm{~m}$
113. (A)

$\triangle \mathrm{PQO} a=b=10, c=12$
$s=\frac{12+10+10}{2}=16$
Now, $\operatorname{Ar}(\Delta \mathrm{PQO})=\sqrt{s(s-a)(s-b)(s-c)}$
$\Rightarrow \frac{1}{2} b \times c \sin \theta=\sqrt{16 \times 6 \times 6 \times 4}$
$\Rightarrow \frac{1}{2} \times 12 \times 10 \sin \theta=4 \times 6 \times 2$
$\Rightarrow \sin \theta=\frac{4}{5}$
In $\triangle \mathrm{PQS}$, By Pythagoras theorem, 3, 4, 5
5 units $\longrightarrow 12$
3 units $\longrightarrow \frac{12 \times 3}{5}=7.2 \mathrm{~cm}$
$\mathrm{OS}=\mathrm{OP}-\mathrm{PS}$

$$
=10-7.2=2.8 \mathrm{~cm}
$$

114. (B) Total efficiency of A, B and C
$=10$ units
Total efficiency of $(B+C)=8$ units
ATQ,
Total work $=10 \times 27=270$
$B$ and $C$ together can complete $\frac{4}{9}$ part of that work
$=\frac{270}{8} \times \frac{4}{9}$ days $=15$ days
115. (A) H.C.F of $\frac{35}{12}, \frac{49}{30}, \frac{21}{20}$
$=\frac{\text { H.C.F of } 35,49 \text { and } 21}{\text { L.C.M of } 12,30 \text { and } 20}=\frac{7}{60}$
116. (A)


Given that
$\angle R P Q=30^{\circ}$ and $\mathrm{SR} \| \mathrm{PQ}$
Now, In $\triangle \mathrm{PQR}$
$\mathrm{PR}=\mathrm{PQ}, \angle \mathrm{P}=30^{\circ}$
Let $\angle \mathrm{R}=x^{\circ}$
$\therefore x^{\circ}+x^{\circ}+30^{\circ}=180^{\circ}$
$x=75^{\circ}$
$\angle \mathrm{RQP}=\angle \mathrm{QRS}=75^{\circ}$ [Alternate angle] In $\triangle \mathrm{RQS}$
$\angle \mathrm{R}=\angle \mathrm{S}=75^{\circ}$
$\angle \mathrm{R}+\angle \mathrm{S}+\angle \mathrm{Q}=180^{\circ}$
$\angle \mathrm{Q}+150^{\circ}=180^{\circ}$
$\angle \mathrm{Q}=30^{\circ}$
117. (B) The total data of production of cars of type $\mathrm{E}=180$
180 units are representing $360^{\circ}$.
Then, the data of production of cars in 2013

$\therefore 42 \longrightarrow 84^{\circ}$
118. (A) Total production of cars of type A in 2014 and type C in $2013=(48+36)=$ 84
Total production of cars of type B in 2016 and type $E$ in 2015
$=(56+35)=91$
Then, Ratio $=84: 91=12: 13$
119. (A) Total production of type B cars in 2012, 2014 and $2015=120$
Total production of type A car in 2013 and 2016 = 91
Required percentage
$=\frac{120-91}{91} \times 100=\frac{29}{91} \times 100$
$=31.9 \%$
120. (D) Average of car type D
$=\frac{51+24+30+46+54}{5}=\frac{205}{5}=41$
No. of years = '2'.
121. (B) An oxygen is one of the constituent of water, similarly sodium is a constituent of salt.
122. (C) As,


Similarly,

123. (A) As,
$46-52=-6$
Similarly,
99-93 = - 6
124. (A) As 'Clothes' are sewn by ' tailor', similarly 'Shoes' are made by 'Cobbler'.
125. (B)

126. (B) $263 \Rightarrow 2 \times 3=6331 \Rightarrow 3 \times 1=3$ $\mathbf{3 8 3} \Rightarrow 3 \times 3 \neq 8551 \Rightarrow 5 \times 1=5$
127. (D) All except Identification are synonyms.
128. (B) Pattern in the series is, +20.5 , +22.5 ,

Next term will be +24.5 and so on.
$\Rightarrow 138+24.5=162.5$
129. (D) $93-(27+3)=63$
$79-(38+4)=37$
Therefore, $67-(16+?)=42$
$\Rightarrow$ ? $=9$
130. (A) $(15-12)+(10-9)=3+1=4$
$(28-12)+(16-20)=16+(-4)=12$
Similarly, $(23-11)+(15-16)=12+(-1)$
= 11.
131. (B) Putting the position of the letters in reverse order
$\mathrm{P}=11, \mathrm{~S}=8, \mathrm{~V}=5$ and $\mathrm{Y}=2$.
132. (C) Total number of triangle is 28.
133. (D) Clearly, while counting the numbers associated to the thumb will be $1,9,17,25$,
i.e., numbers of the form $(8 n+1)$.

Since, $2016=252 \times 8+0$
So, 2017 shall correspond to the thumb and 2016 to the index finger.
134. (D) $\mathbf{r} / \mathrm{q} \mathrm{p} \times \mathbf{x} \mathrm{r} / \mathrm{q} \mathbf{p} \times \mathrm{r} / \mathrm{q} \mathrm{p} \times \mathrm{r} / \mathrm{q} \mathrm{p} \times \mathrm{x}$
135. (A) From figure
$6 \leftrightarrow 3$
$2 \leftrightarrow 4$
$1 \leftrightarrow 5$
 will be formed by folding the
figure
136. (A) The word is HISTORY and the code is

## 6742153.

137. (C)
138. (B)

Conclusion I $\rightarrow x$
II $\rightarrow \checkmark$

So, only conclusion II follows.
139. (A)

140. (C) Nisha's mother's mother is man's mother i.e., Nisha's mother is man's sister (or) Nisha is man's niece.
141. (C)

142. (C) As he failed once in class 1, it means in 2 years after admission, he will pass class 1, after 3 years class 2, after 4 years class 3. Similarly, after 11 years class 10.
So, required no. of years to pass class 10
$=2+3+4+5+\ldots . .+11$
$=\frac{11 \times 12}{2}-1=66-1=65 \mathrm{yrs}$
So, at the age of $65+4=69$ years, he will pass his matriculation.
143. (C)
144. (C) Number of educated poor youth $=11$ $+3=14$
145. (A) Conference $\rightarrow$ Registration $\rightarrow$ Invitation $\rightarrow$ Representatives $\rightarrow$ Participate
146. (A)

|  | P | Q | R | S | T |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Educated | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\times$ | $\times$ |
| Hard working | $\checkmark$ | $\times$ | $\checkmark$ | $\checkmark$ | $\times$ |
| Employed | $\times$ | $\times$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Polite | $\checkmark$ | $\checkmark$ | $\times$ | $\checkmark$ | $\checkmark$ |

147. (B) $9 \div 16-25+10 \times 20=$ ?

After changing the signs as per the given details,
$9+16 \times 25 \div 10-20=9+16 \times \frac{25}{10}-20=\mathbf{2 9}$ 148. (B) As,


Similarly,

149. (B)
150. (C)
151. (B)
152. (D) As


Similarly,

153. (C)


The distance between his final position and starting position is $(7+5.5)=12.5$ km . So, he is 12.5 km east to the starting position.
154. (C) Current age of mother, daughter and son $=87$
After 8 years their age $=87+(3 \times 8)$

$$
=87+24
$$

$$
=111
$$

155. (B) As,

$$
\begin{aligned}
& \text { D I } \quad \text { G } \\
& \downarrow \\
& \downarrow \\
& (4+9 \\
& (4) \\
& \hline
\end{aligned}
$$

$\stackrel{\mathrm{C}}{\mathrm{U}} \stackrel{\mathrm{T}}{\downarrow} \downarrow$
$(3+21+20)+5=49$
Similarly,


Direction (156-160): Answer
Answer it right ba, ja, nu where is it right from here fi, ba, to here she is sa, vi ja fi, sa, ho Right $\rightarrow$ ja, is $\rightarrow$ fi, here $\rightarrow$ sa, it $\rightarrow$ ba answer $\rightarrow$ nu, from $\rightarrow$ vi, she $\rightarrow$ ho where $\rightarrow$ to
156. (C) 157. (B) 158. (C) 159. (C) 160. (A)

## UP SI ANSWER KEY - 55

| 1. | (D) | 21. | (D) | 41. | (C) | 61. | (A) | 81. | (B) | 101. (B) | 121. (B) | 141. (C) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2. | (B) | 22. | (B) | 42. | (D) | 62. | (C) | 82. | (D) | 102. (A) | 122. (C) | 142. (C) |
| 3. | (A) | 23. | (B) | 43. | (B) | 63. | (C) | 83. | (B) | 103. (D) | 123. (A) | 143. (C) |
| 4. | (A) | 24. | (C) | 44. | (C) | 64. | (C) | 84. | (D) | 104. (B) | 124. (A) | 144. (C) |
| 5. | (A) | 25. | (A) | 45. | (B) | 65. | (D) | 85. | (C) | 105. (C) | 125. (B) | 145. (A) |
| 6. | (C) | 26. | (D) | 46. | (C) | 66. | (B) | 86. | (D) | 106. (B) | 126. (B) | 146. (A) |
| 7. | (C) | 27. | (A) | 47. | (A) | 67. | (D) | 87. | (A) | 107. (C) | 127. (D) | 147. (B) |
| 8. | (D) | 28. | (C) | 48. | (A) | 68. | (C) | 88. | (B) | 108. (C) | 128. (B) | 148. (B) |
| 9. | (D) | 29. | (C) | 49. | (C) | 69. | (C) | 89. | (C) | 109. (C) | 129. (D) | 149. (B) |
| 10. | (A) | 30. | (B) | 50. | (D) | 70. | (C) | 90. | (A) | 110. (C) | 130. (A) | 150. (C) |
| 11. | (D) | 31. | (B) | 51. | (D) | 71. | (A) | 91. | (B) | 111. (B) | 131. (B) | 151. (B) |
| 12. | (A) | 32. | (C) | 52. | (B) | 72. | (B) | 92. | (B) | 112. (B) | 132. (C) | 152. (B) |
| 13. | (B) | 33. | (C) | 53. | (D) | 73. | (D) | 93. | (C) | 113. (C) | 133. (D) | 153. (C) |
| 14. | (D) | 34. | (C) | 54. | (D) | 74. | (C) | 94. | (D) | 114. (D) | 134. (D) | 154. (C) |
| 15. | (C) | 35. | (B) | 55. | (B) | 75. | (A) | 95. | (B) | 115. (A) | 135. (A) | 155. (C) |
| 16. | (B) | 36. | (C) | 56. | (B) | 76. | (C) | 96. | (A) | 116. (A) | 136. (A) | 156. (C) |
| 17. | (D) | 37. | (D) | 57. | (B) | 77. | (C) | 97. | (C) | 117. (B) | 137. (C) | 157. (B) |
| 18. | (D) | 38. | (C) | 58. | (C) | 78. | (C) | 98. | (B) | 118. (B) | 138. (B) | 158. (C) |
| 19. | (D) | 39. | (D) | 59. | (A) | 79. | (A) | 99. |  | 119. (D) | 139. (A) | 159. (C) |
| 20. | (D) | 40. | (C) | 60. | (D) | 80. | (D) | 100. | (D) | 120. (B) | 140. (C) | 160. (A) |



