## SSC MOCK TEST -2 (SOLUTION)

1. (A) On the television a programme is telecast. In the same way on the radio a programme is broadcast.
2. (D) Antonyms of Day is Night, So antonyms of Dusk will be dawn.
3. (C) Mouth is related to articulation. In the same way music is related to tune.
4. (C) If Gravity is related to pull. In the same way Magnetism is related to Attraction.
5. (C) $8^{3}=512 \rightarrow$ Reverse of 512 is 215
$6^{3}=216 \rightarrow$ Reverse of 216 is 612
6. (B) $6 \times 3+2=20,5 \times 3+2=17$
7. (D)

8. (D) $115^{2}=13225,165^{2}=27225$
9. (C) Stearing wheel, engine and tyre are the parts of a car.
10.(D) Except Vishakhapatnam, all are the capitals of states.
11.(C)
(A)

(B)

(C)

(D) $\stackrel{+1}{\stackrel{+}{N}}$

(B) $\underset{\sim}{\stackrel{l+2 \wedge}{G} I}$
(C) $\underset{1+1}{ } \mathrm{~N} P \mathrm{P}$
(D) $\underset{+1+1}{T}+2 \uparrow$
10. (A)
13.(C) Guitar, Violin \& Veena are stringed insturments but flute is a wind instrument.
14.(D) $6 \quad 13 \quad 18 \quad 25 \quad 30 \quad 37 \quad 40 \rightarrow 42$ $\frac{\downarrow+7 \uparrow \downarrow+5 \uparrow+7 \uparrow \downarrow+5 \uparrow+7 \uparrow+5 \uparrow}{\text { Desk, Chair and Bench }}$
15.(D) Desk, Chair and Bench are open furniture. Cupboard is a closed furniture.
11. (D) Golf, Cricket and Hockey are outdoor games. Carrom is an Indoor game.
17.(D) Rest are odd numbers.
18.(B)
$\begin{array}{cccccccc}2, & 3, & 10, & 15, & 26 & \mathbf{3 5}, & 50, & 63 \\ \downarrow & \downarrow \\ \downarrow & \downarrow & \downarrow \\ 1^{2}+1 & 2^{2}-1 & 3^{2}+1 & 4^{2}-1 & 5^{2}+1 & 6^{2}-1 & 7^{2}+1 & 8^{2}-1\end{array}$
19.(C) $8 \times 8 \times 88=5632$
$7 \times 7 \times 77=3773$
$9 \times 6 \times 58=3132$
20.(B) $\frac{28}{7}+4=8, \frac{35}{5}+3=10, \frac{32}{8}+\mathbf{5}=9$
21.(C) $7+8-9=6,1+19-10=10$,
$14+10-16=8$
22.(C)

12. (D) $\mathrm{K}>\mathrm{B}$ and $\mathrm{Y}>\mathrm{B}>\mathrm{J}$. It means J is on bottom.
24.(C) Dog is called as Elephant.
13. (C)
 ( $8,24,40$ are even numbers) $9,27,45$ are odd numbers)
14. (A) $16+4 \div 2 \times 3=22=16+2 \times 3=16+6=22$
15. (B) After replacing the $*$ sign we have $(49 \div 7 \times 3-5+8=24)$ $7 \times 3-5+8=24$

$$
21+8-5=24
$$

$$
29-5=24
$$

$$
24=24
$$

28. (B) VIEW
29. (B)

(Alphabetic position from last to first) Similarly,

| $S$ | K | Y |
| :---: | :---: | :---: |
| $\downarrow$ | $\downarrow$ | $\downarrow$ |
| 8 | 16 | 2 |

30.(B) Set of three letters are horizontally reversed.
31. (A)

32. (C)

$17+16+13+10+20+9=85$


$$
17+16+10+15+21+6+19=\mathbf{1 0 4}
$$

33. (D)

34. (D) Both the conclusions do not have relation with the statement.
35. (A)
36. (B)

37. (A)
38.(D) A is 9th from left and B is 5th from right position. After interchanging their positions, position of A will be 18th from the left
It means there are 8 people sitting between them
Now position of B from Right $=(5+8)+1=14$
39.(B) Next bus is at 10:30 in the morning which means previous bus was at 10:00 in the morring. An enquiry was given 10 minutes after bus had left. It means an enquiry staff has given the information at 10:10 in the morning.
40.(D) Number of students who play cricket

$$
=25+16=41
$$

41.(C)
42.(D)
43.(C)

| P | Q | R | S |
| :---: | :---: | :---: | :---: |
| June | July | August | September |
| 30 | 31 | 31 | 30 |

44.(B)
45. (C)
46. (C)
47.(B)
48.(C) Series of continuous prime numbers
$2,3, \underline{\mathbf{5}}, 7,11, \mathbf{1 3}, \mathbf{1 7}, 19, \underline{23}$
49.(B) $\underline{\mathbf{A}}$ EIOU $\underline{\mathbf{E}}$ IOUA $\underline{I}$ OUAE $\underline{\mathbf{O}}$ UAEI $\underline{\mathbf{U}}$ AEIO
50.(C)
51.(C)

$$
\begin{aligned}
5^{71}+5^{72}+5^{73} & =5^{70}\left(5+5^{2}+5^{3}\right) \\
& =5^{70}(5+25+125) \\
& =155 \times 5^{70} \\
& =155
\end{aligned}
$$

52.(B) Let the five numbers are $a, b, c, d, e$

$$
\therefore \quad a \times b \times c \times d \times e=(\text { H.C.F. })^{n-1} \times \text { L.C.M. }
$$

$$
\begin{aligned}
& =(4)^{5-1} \times 27720 \\
& =256 \times 27720 \\
& =7096320
\end{aligned}
$$

53. (B) $\frac{2^{33}}{10} \Rightarrow \frac{2 \times 2^{32}}{2 \times 5} \Rightarrow \frac{\left(2^{4}\right)^{8}}{5} \Rightarrow \frac{16^{8}}{5}$

$$
\begin{array}{ll}
\Rightarrow & \frac{(15+1)^{8}}{5}=\frac{(1)^{8}}{5}=1 \\
\therefore & 1 \times 2=2
\end{array}
$$

54. (B) Let the second number $=x$
$1^{\text {st }}$ number $\times 2^{\text {nd }}$ number $=$ L.C.M. $\times$ H.C.F.

$$
\begin{aligned}
189 \times x & =2079 \times 27 \\
x & =297
\end{aligned}
$$

55.(C) S. P. of 5 lemons $=` 14$

| $40 \%$ profit $=\frac{2}{5}$ |  |
| :---: | :---: |
| C.P. | S.P. |
| 5 | 7 |
| $\downarrow \times 2$ | $\downarrow \times 2$ |
| 10 | 14 |

$\therefore \quad \mathrm{CP}$ of 5 lemons $={ }^{`} 10$
CP of 1 lemon= ` 2 \(\therefore \quad \mathrm{CP}\) of 12 lemons \(={ }^{`} 24\)
56. (C) Weight of 1st type $=18 \mathrm{gm}$

Weight of 2nd type $=12 \mathrm{gm}$
Pure Gold is 24 carat
So, $\quad 20: 4=5: 1=6 \times(4)$

$$
15: 9=5: 3=8 \times(2)
$$

$\therefore \quad 20: 4=24$

| $10: 6=16$ |
| :--- |
| $30: 10=40$ |

[ $\because$ ratio between 24 and
16 is same as ratio
between 18 and 12 ]

| $\underline{2 \dot{4}}$ | 24 |
| :---: | :---: |
| $\downarrow$ 40 |  |
| 18 | 24 |

57.(C) R.I $=5 \%=\frac{1 \rightarrow \text { Interest }}{20 \rightarrow \text { Principal }}$

Amount same

$$
\begin{aligned}
\left(\frac{21}{20}\right)^{3} \mathrm{~A} & =\left(\frac{21}{20}\right)^{5} \mathrm{~B} \\
\frac{\mathrm{~A}}{\mathrm{~B}}=\left(\frac{21}{20}\right)^{2} & =\frac{441}{400} \\
\text { A gets } & =\frac{441}{841} \times 2523 \\
= & 1323
\end{aligned}
$$

58. (D)

$\therefore$ initial S.P. of Cow (S.P. ${ }_{1}$ ) $=108 \times 160$
$={ }^{`} 17280$
59.(C)

$\therefore$ One day work of $\mathrm{C}=4-3=1$ One day work of $\mathrm{A}=4-2=2$
So,
$(A+C)$ will do the work in $=\frac{24}{1+2}=8$ days
60.(B) Ratio of efficiency of A and $\mathrm{B}=3: 1$

Ratio of time taken by A and B = 1:3
So,

$$
3-1=2 \xrightarrow{\times 30} 60
$$

$\therefore$ Time taken by A $=30$,

Time taken by B $=3 \times 30=90$


Work will be completed in $=\frac{90}{4}=22 \frac{1}{2}$ days
61.(D) Divisor $=$ quotient $\times 4$

Divisor $=$ Remainder $\times 2$
If a is divisor

$$
\begin{aligned}
\text { Then quotient } & =\frac{a}{4} \\
\text { Remainder } & =\frac{a}{2}
\end{aligned}
$$

We know that
dividend $=$ Divisor $\times$ quotient + remainder

$$
\begin{aligned}
& b=a \times \frac{a}{4}+\frac{a}{2}=\frac{a^{2}}{4}+\frac{2 a}{4} \\
\therefore \quad & \frac{a(a+2)}{b}=4
\end{aligned}
$$

62.(B)

$$
\begin{aligned}
& \text { Required days }=\frac{\text { Days }}{\frac{\mathrm{Men}_{2}}{\mathrm{Men}_{1}}+\frac{\text { Women }_{2}}{\text { Women }_{1}}} \\
& \Rightarrow \frac{14}{\frac{8}{12}+\frac{16}{18}} \Rightarrow \frac{14 \times 36}{56}=9 \text { days }
\end{aligned}
$$

63. (C)

$\therefore$ Total marks decreased $=18$
Total average marks decreased $=\frac{18}{200}=0.9$
So, actual average of 200 students is

$$
=57+0.9=57.09
$$

64.(C)

$\therefore 7 x=63000 \Rightarrow x={ }^{\prime} 9000$
65. (C) Let downstream speed $=x \mathrm{~km} / \mathrm{hr}$

Let upstream speed $=y \mathrm{~km} / \mathrm{hr}$

$$
\begin{align*}
\therefore & \frac{12}{y}+\frac{8}{x} & =3  \tag{i}\\
& \text { and } \quad \frac{18}{y}+\frac{32}{x} & =7 \tag{ii}
\end{align*}
$$

Subtract equation (ii) from [ $\mathrm{eq}^{\mathrm{n}}(\mathrm{i}) \times 4$ ]

$$
\begin{aligned}
\frac{30}{y} & =12-7=5 \\
\Rightarrow \quad y & =6 \mathrm{~km} / \mathrm{hr}
\end{aligned}
$$

Put this value in eq. (i)

$$
\frac{12}{6}+\frac{8}{x}=3 \Rightarrow x=8 \mathrm{~km} / \mathrm{hr}
$$

So, speed of current

$$
=\frac{\begin{array}{c}
\text { down stream speed } \\
- \text { up stream speed }
\end{array}}{2}
$$

$$
\Rightarrow \quad \frac{8-6}{2}=1 \mathrm{~km} / \mathrm{hr}
$$

66. (C) Total weight of two students

$$
=45+45+\frac{150 \times 48}{1000} \mathrm{~kg}=97.2 \mathrm{~kg}
$$

So, average weight $=\frac{97.2}{2}=48.6 \mathrm{~kg}$
67. (C) Let the length of the train $=x \mathrm{~m}$

Then the speed of the train $=\frac{x}{8} \mathrm{~m} / \mathrm{sec}$

$$
\begin{aligned}
\text { And } & \frac{x+420}{20} & =\frac{x}{8} \\
\Rightarrow & \frac{x+420}{5} & =\frac{x}{2} \Rightarrow 2 x+840=5 x \\
\Rightarrow & x & =280
\end{aligned}
$$

speed of the train $=\frac{280}{8} \times \frac{18}{5} \mathrm{~km} / \mathrm{hr}$

$$
=126 \mathrm{~km} / \mathrm{hr}
$$

68. (A)


$$
\begin{aligned}
& 26 \% \text { Profit }=\frac{13}{50} \rightarrow \text { Crofit } \\
& \text { C.P. } \rightarrow \text { C.P. } 50, \text { S.P. } \rightarrow \text { }
\end{aligned}
$$

69. (C)

$$
10 \%=\frac{1}{10}
$$

Let principal $=1000$

$\therefore$ Interest of 3 rd year $=100+10+10+1$

$$
\begin{array}{lc}
\Rightarrow & 121 \xrightarrow{\times .6} 72.60 \\
\therefore & \text { Principal }=1000 \times .6={ }^{`} 600
\end{array}
$$

70.(D)

$$
\begin{gather*}
x=2-2^{\frac{1}{3}}+2^{\frac{2}{3}} \\
x-2=2^{\frac{2}{3}}-2^{\frac{1}{3}} \tag{i}
\end{gather*}
$$

Cubing both sides

$$
\Rightarrow \quad x^{3}-8-6 x(x-2)=(2)^{2}-2-3 \times 2^{\frac{2}{3}} \times 2^{\frac{1}{3} \times}
$$

$$
\left(2^{\frac{2}{3}}-2^{\frac{1}{3}}\right)
$$

$$
\Rightarrow \quad x^{3}-8-6 x^{2}+12 x=4-2-3 \times 2(x-2)
$$

[from equation]

$$
\begin{array}{ll}
\Rightarrow & x^{3}-6 x^{2}+12 x-8=2-6(x-2) \\
\Rightarrow &
\end{array} x^{3}-6 x^{2}+18 x=22
$$

$$
\therefore \quad x^{3}-6 x^{2}+18 x+40=22+40
$$

$$
=62
$$

71.(C) $1^{\text {st }}$ rate of interest $=x \%$
$2^{\text {nd }}$ rate of interest $=(x+3) \%$
After 3 year $=9 \%$ increment in rate

$$
9 \%=1296
$$

$$
100 \%=\frac{1296}{9} \times 100=` 14400
$$

72.(C) Drawn part $=\frac{15}{150}=\frac{1}{10}$

$$
\text { Water }=\begin{array}{ccc}
\text { initial } & : & \text { later } \\
10 & : & 9 \\
\frac{10}{100} & : & \frac{9}{81} \\
& 19 &
\end{array}
$$

So, ratio of water and alcohol = 81: 19
73. (C) Let the first number $=17 \times 1+13=30$ second number $=17 \times 1+11=28$

$$
\text { Sum }=30+28=58
$$

$\therefore 58 \div 17$, Remainder $=7$
74.(C)
M.R.P. S.P.

$$
\begin{array}{ccc}
40 \%=\frac{2}{5} & 5 & 3 \\
30 \%=\frac{3}{10} & 10 & 7 \\
20 \%=\frac{1}{5} & \frac{5}{250} & \frac{4}{84} \\
& \left\lvert\, \frac{2}{5}\right. & \downarrow \frac{2}{5} \\
& \downarrow & \downarrow 3.6
\end{array}
$$

So, Discount \% = 100-33.6=66.4\%
75.(C) Fruits sold $=200$ mangoes

$$
\text { Profit } \%=\frac{40}{200-40}=\frac{1}{4}=25 \%
$$

$$
\begin{aligned}
\text { Loss } & =\frac{40}{240}=\frac{1}{6}=16 \frac{2}{3} \% \\
\text { Difference } & =25 \%-16 \frac{2}{3} \%=8 \frac{1}{3} \%
\end{aligned}
$$

76. (B)


If O is orthocentre
$\therefore \quad \angle \mathrm{BOC}=180^{\circ}-\angle \mathrm{A}$
$\therefore \quad \angle \mathrm{BOC}+\angle \mathrm{BAC}=180^{\circ}-\angle \mathrm{A}+\angle \mathrm{A}$

$$
=180^{\circ}
$$

77.(C) $\sin \theta=1-\sin ^{2} \theta \Rightarrow \sin \theta=\cos ^{2} \theta$
$\therefore \cos ^{12} \theta+3 \cos ^{10} \theta+3 \cos ^{8} \theta+\cos ^{6} \theta-1$
$\Rightarrow \sin ^{6} \theta+3 \sin ^{5} \theta+3 \sin ^{4} \theta+\sin ^{3} \theta-1$
$\Rightarrow\left(\sin \theta+\sin ^{2} \theta\right)^{3}-1$
$\Rightarrow(1)^{3}-1=0$
78. (B)

$\tan 60=\frac{\mathrm{AD}}{\mathrm{BD}}=\frac{\sqrt{3}}{1}$
$\tan 30=\frac{\mathrm{AD}}{\mathrm{DC}}=\frac{1}{\sqrt{3}}=\frac{\sqrt{3}}{3}$
$\mathrm{BC}=1 \mathrm{~km}$
$1+3=4 \rightarrow 1 \mathrm{~km}$
then $\sqrt{3} \rightarrow \frac{\sqrt{3}}{4}$
79. (A) $\tan \left(5 x-10^{\circ}\right)=\cot \left(5 y+20^{\circ}\right)$

$$
\begin{array}{ll} 
& \tan \left(5 x-10^{\circ}\right)=\tan \left[90^{\circ}-\left(5 y+20^{\circ}\right)\right] \\
\Rightarrow & 5 x-10^{\circ}=90^{\circ}-5 y-20^{\circ} \\
\Rightarrow & 5 x-10^{\circ}=70^{\circ}-5 y^{\circ} \\
\Rightarrow & 5 x+5 y=70+10=80^{\circ} \\
\Rightarrow & x+y=\frac{80}{5}=16^{\circ}
\end{array}
$$

80. (B) $\sec \theta-\cos \theta=\frac{3}{2}$

$$
\Rightarrow \sec \theta-\frac{1}{\sec \theta}=\frac{3}{2}
$$

$$
\Rightarrow \frac{\sec ^{2} \theta-1}{\sec \theta}=\frac{3}{2}
$$

$\Rightarrow 2 \sec ^{2} \theta-2=3 \sec \theta$

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$\Rightarrow 2 \sec ^{2} \theta-3 \sec \theta-2=0$
$\Rightarrow 2 \sec ^{2} \theta-4 \sec \theta+\sec \theta-2=0$
$\Rightarrow(\sec \theta-2)(2 \sec \theta+1)=0$

$$
\sec \theta=2 \text { or } \sec \theta=-\frac{1}{2}
$$

$\theta$ is positive acute angle.
So, $\sec \theta=2$
81.(A) $x+\frac{1}{x}=2 \mathrm{~A}$
$\Rightarrow x^{3}+\frac{1}{x^{3}}+3 \times x \times \frac{1}{x}\left(x+\frac{1}{x}\right)=(2 \mathrm{~A})^{3}$
(Cubing both sides)
$\Rightarrow x^{3}+\frac{1}{x^{3}}+3 \times 2 \mathrm{~A}=8 \mathrm{~A}^{3}$
$\Rightarrow x^{3}+\frac{1}{x^{3}}=8 \mathrm{~A}^{3}-6 \mathrm{~A}$
So, Average of $x^{3}$ and $\frac{1}{x^{3}}=\frac{2\left(4 \mathrm{~A}^{3}-3 \mathrm{~A}\right)}{2}$

$$
=4 \mathrm{~A}^{3}-3 \mathrm{~A}
$$

82.(A) Let radius is $a_{1}$ and $a_{2}$
$\therefore \frac{a_{1}^{2}}{a_{2}^{2}}=\frac{9}{16} \Rightarrow \frac{a_{1}}{a_{2}}=\frac{3}{4}$
$\therefore$ Ratio of volume $=\frac{a_{1}^{3}}{a_{2}^{3}}=\left(\frac{3}{4}\right)^{3}=\frac{27}{64}$
83.(D) Volume of pyramid $=\frac{1}{3} \times$ area of base $\times$ height

$$
\begin{aligned}
\Rightarrow & =\frac{1}{3} \times 324 \times h=1296 \\
h & =\frac{1296}{108}=12
\end{aligned}
$$

Area of base $=324$

$$
\begin{aligned}
& a^{2}=324 \\
& a=18
\end{aligned}
$$

Perimeter $=4 \times a 72$
Area of slant surface

$$
\begin{aligned}
& =\frac{1}{2} \times \text { perimeter of base } \times \text { height } \\
& =\frac{1}{2} \times 72 \times 12=432
\end{aligned}
$$

84.(D) Let the side of a equilateral triangle is $a$
$\therefore$ Perimeter $=3 a$
The radius of square $=r$
So,

$$
3 a=2 \pi r \Rightarrow a=\frac{2 \pi r}{3}
$$

$\therefore \quad$ Required ratio $=\frac{\sqrt{3}}{4} a^{2}: \pi r^{2}$
$=\frac{\sqrt{3}}{4} \times\left(\frac{2 \pi r}{3}\right)^{2}: \pi r^{2}=\frac{\sqrt{3}}{4} \times \frac{4 \pi^{2} r^{2}}{9}: \pi r^{2}$
$=\frac{\sqrt{3}}{9} \times \frac{22}{7}: 1 \Rightarrow 22: 21 \sqrt{3}$
85.(B)

$$
\begin{aligned}
& \mathrm{V}_{\text {Cone }}: \mathrm{V}_{\text {Cylinder }}: \mathrm{V}_{\text {Hemisphere }} \\
= & \frac{1}{3} \pi r^{3}: \pi r^{2} \mathrm{~h}: \frac{2}{3} \pi r^{3}=\frac{1}{3}: 1: \frac{2}{3} \\
= & 1: 3: 2
\end{aligned}
$$

86.(A) If $a, b, c$ are lengths of perpendiculars Then,

Side of the triangle $=\frac{2}{\sqrt{3}}(a+b+c)$

$$
\begin{aligned}
\therefore \quad \text { Area } & =\frac{\sqrt{3}}{4}(\text { side })^{2} \\
& =\frac{\sqrt{3}}{4}\left\{\frac{2}{\sqrt{3}}(a+b+c)\right\}^{2} \\
& =\frac{\sqrt{3}}{4} \times \frac{4}{3}(a+b+c)^{2} \\
& =\frac{\sqrt{3}}{3}(a+b+c)^{2}
\end{aligned}
$$

87.(D) $a^{2}+b^{2}+c^{2}=2 a-2 b-2 c-1-1-1$
$\Rightarrow a^{2}-2 a+1+b^{2}+2 b+1+c^{2}+2 c+1=0$
$\Rightarrow(a-1)^{2}+(b+1)^{2}+(c+1)^{2}=0$
$\therefore(a-1)^{2}=0 \Rightarrow a=1$
$(b+1)^{2}=0 \Rightarrow b=-1$
$(c+1)^{2}=0 \Rightarrow c=-1$
$\therefore a+b+c \Rightarrow 1+(-1)+(-1)$

$$
\Rightarrow \quad-1
$$

88. (C) $\frac{a^{6}+a^{4}+a^{2}+1}{a^{3}}=a^{3}+a+\frac{1}{a}+\frac{1}{a^{3}}$
$\Rightarrow a^{3}+\frac{1}{a^{3}}+a+\frac{1}{a}$
If

$$
a=2+\sqrt{3}
$$

$$
\frac{1}{a}=\frac{1}{2+\sqrt{3}} \times \frac{2-\sqrt{3}}{2-\sqrt{3}}
$$

$$
\frac{1}{a}=2-\sqrt{3}
$$

$$
a+\frac{1}{a}=2+\sqrt{3}+2-\sqrt{3}=4
$$

$$
a^{3}+\frac{1}{a^{3}}=(4)^{3}-4 \times 3
$$

$$
=64-12=52
$$

$\Rightarrow\left(a^{3}+\frac{1}{a^{3}}\right)+\left(a+\frac{1}{a}\right)=52+4=56$
89.(D) Volume of hollow cylinder $=\pi\left(\mathrm{R}^{2}-r^{2}\right) h$
$\therefore \quad \pi\left(9^{2}-r^{2}\right) \times 14=748$

$$
\begin{aligned}
81-r^{2} & =\frac{748}{14} \times \frac{7}{22} \\
r^{2} & =81-17=64 \\
r & =8
\end{aligned}
$$

So, thickness $=9-8=1 \mathrm{~cm}$
90.(B)


ABCD is a Trapezium
A line $C E$ is drawn parallel to $D A$ intersecting, $\mathrm{CE}=12 \mathrm{~cm}, \mathrm{AE}=28 \mathrm{~cm}$
$\therefore \triangle \mathrm{CEB}$ is equilateral triangle
$\therefore h=\frac{\sqrt{3}}{2} \times 12=6 \sqrt{3}$
Area of trapezium

$$
\begin{aligned}
& =\frac{1}{2} \times \text { sum of parallel side } \times h \\
& =\frac{1}{2} \times(28+40) \times 6 \sqrt{3} \\
& =204 \sqrt{3} \mathrm{~cm}^{2}
\end{aligned}
$$

91.(D)


ABC is a isosceles triangle in which

$$
\begin{aligned}
& A B=A C \\
& \therefore \quad \angle \mathrm{~B}-\angle \mathrm{C}=x^{\circ} \\
& \angle \mathrm{A}=2 \times 2 x^{\circ}=4 x^{\circ} \\
& \because \angle \mathrm{A}+\angle \mathrm{B}+\angle \mathrm{C}=180^{\circ} \\
& \Rightarrow \quad 4 x^{\circ}+x^{\circ}+x^{\circ}=180^{\circ} \\
& \Rightarrow \quad 6 x^{\circ}=180^{\circ} \\
& \Rightarrow \quad x^{\circ}=30^{\circ}
\end{aligned}
$$

$\therefore$ Required angle $=\frac{4 x^{\circ}}{2}=\frac{4 \times 30}{2}=60^{\circ}$
92.(C) $x+y+z=6=1+2+3$
$(x-1)+(y-2)+(z-3)=0$
We know that if $a+b+c=0$
Then

$$
\begin{aligned}
& a^{3}+b^{3}+c^{3}= \\
& \therefore(x-1)^{3}+(y-2)^{3}+(z-3)^{3} \\
&=3(x-1)(y-2)(z-3)
\end{aligned}
$$

93.(B) $p^{4}+\frac{1}{p^{4}}=119$

$$
\begin{gathered}
\begin{array}{c}
\Rightarrow \quad p^{2}+\frac{1}{p^{2}}=\sqrt{119+2}=11 \\
p-\frac{1}{p}=\sqrt{11-2}=3
\end{array} \\
\begin{aligned}
\therefore & p^{3}-\frac{1}{p^{3}}=(3)^{3}+3 \times 3 \\
& =27+9=36
\end{aligned} \\
\because \quad\left[\text { If } p-\frac{1}{p}=x, \text { then } p^{3}-\frac{1}{p^{3}}=x^{3}+3 x\right]
\end{gathered}
$$

94. (A) Sum of all interior angles $=(n-2) 180^{\circ}$

$$
\begin{aligned}
(n-2) 180^{\circ} & =1440^{\circ} \\
n-2 & =\frac{1440}{180}=8 \\
n & =8+2=10
\end{aligned}
$$

95. (C) Length of direct common tangent

$$
\begin{aligned}
& =\sqrt{\left(\mathrm{C}_{1} \mathrm{C}_{2}\right)^{2}-\left(r_{1}-r_{2}\right)^{2}}=\sqrt{(13)^{2}-(8-3)^{2}} \\
& =\sqrt{169-25}=\sqrt{144}=12 \mathrm{~cm}
\end{aligned}
$$

96. (C) Budget on clothing and grocery
$\Rightarrow \quad 8 \%+20 \% \Rightarrow 28 \%$
$\therefore \quad 100 \%={ }^{`} 32000$

$$
28 \%=` 320 \times 28=` 8960
$$

97. (A)

$$
100 \%=` 32000
$$

$$
20 \%=` 320 \times 20=` 6400
$$

So, difference $=` 6400-` 4672$

$$
={ }^{`} 1728
$$

98.(B) Difference $=19 \%-6 \%=13 \%$

So, $\quad 100 \%=32000$

$$
13 \%=320 \times 13
$$

$$
={ }^{`} 4160
$$

99. (C) Miscellaneous expenditure = ` $320 \times 7$

$$
={ }^{`} 2240
$$

$\therefore$ Increment $=` 3040-$ ` 2240

$$
=` 800
$$

100. (D) Estimated electricity bill

$$
=3200 \times \frac{19}{100}=` 6080
$$

saved = ` 1920
$\therefore$ Actual expense on electricity

$$
\begin{aligned}
& =`(6080-1920) \\
& =` 4160
\end{aligned}
$$

$\therefore$ Required Percentage

$$
=\frac{4160}{32000} \times 100 \%=13 \%
$$



## 2007, OUTRAM LINES, 1ST FLOOR, NEAR GTB NAGAR METRO STATION, GATE NO. - 2, DELHI-110009

101. (C) Market failure is an economic term that encompasses a situation wherein any given market, the quantity of a product demanded by consumers does not equate to the quantity supplied by suppliers. This is a direct result of a lack of certain economically ideal factors, which presents equilibrium. Market failure has negative effects on the economy because an optimal allocation of resources is not attained.
102. (C) C. Raja Gopalachari is also referred as 'Rajaji'. He was elected as a president of the Tamil Nadu congress Committee. The Vedaranyam March or Vedaranyam Satyagraha was organised to protest the salt tax imposed by the British Raj in India. The march took place in 1930 and was second of its kind of Dandi March organised by Gandhiji both in the framework of Civil Disobedience Movement. The Vedaranyam March was led by a group of 100 volunteers from the Indian National Congress (INC) under the leadership of Rajaji. It began at Trichinopoly (now Tiruchirappalli) and ended in Vedaranyam, a small coastal town in Tanjore District. The marchers broke the salt law. The campaign ended on 28th April 1930.
103. (A) Edicts of Ashoka are a collection of 33 inscriptions on the pillars of Ashoka. These edicts describes Ashoka's view about dhamma. In these inscriptions Ashoka refers himself as 'Beloved of the Gods' (Devnampriya priyadasrshi). Ardhamagadhi is an archaic form of Magadhi language of ancient India following the decline of Pali and Sanskrit. In his edicts he laid emphasis on equality or universal brotherhood in Prakrit language ardhmagadhi.
104. (C) The 'Principle of Maximum Social Advantage' was introduced by British economist Hugh Dalton. 'Public Finance' is concerned with income and expenditure of public authorities and with the adjustment of one with the other.
105. (D) Every state has a legislative Assembly. Certain states have an Upper House also known as State Legislative Council. There is a governor for each state who is appointed by the President. Governor is the head of the state and the executive power of the state is vested in him. The council of Minister with the Chief Minister as its head advises the Governor in the discharge of the executive functions. The council of Minister of a state is collectively responsible to the legislative Assembly of the state
106. (C) The Labrador Current is a cold current in North Atlantic Ocean which flows from the Arctic Ocean south along the coast of Labrador and passes around New Foundland along the east coast of Nova

Scotia. It is the continuation of west Greenland current and the Baffin Island current. At the Grand Banks in south east of New foundland it meets the warm Gulfstream. The combination of these two currents produces heavy fogs and creates richest fishing grounds in the world. Labrador current produces cooling effect on Canadian Atlantic provinces and USA upper North East coast.
110. (B) Fixed investment is the investment in fixed capital, physical assets like machinery, land, buildings installations, vehicles or technology.
111. (C) Kaal Baishakhi is also known as Nor'wester. It causes dramatic appearance in the afternoon or evening of pre-mosoon months over Bengal, Bihar, Assam and adjoining areas. It is a subject of universal interest for a number of reasons. It not only gives relief after mid-day heat but pours well on its crops. It's nature is unique and the causes are really interesting. Kaal Baishakhi is a localised thunderstorm associated with violent thunderstorms and torrential rainfall in India. Basically in Bengal, it is known as Kaal Baisakhi' or calamity of the month of Baisakh (April 15-May 15). In some parts of India it helps in ripening of mangoes and hence it is also known as mango shower.
112. (B) The special economic zone (SEZ) policy in India first came into inception on April 1, 2000. Its main objective was to enhance foreign investment and provide an internationally competitive and hassle free environment for exports. Its Idea was to promote exports from the country and realising the need that level playing field must be made available to the domestic enterprises and manufactures to be competitive globally.
113. (A) An ecomomy in which no activity is conducted with outside economies is called a closed economy. In a closed econonomy no imports are brought in and no exports are sent out and it prohibits any other country from participating in their stock market
114. (D) The factory was first set up in India to produce Ammonium Sulphate (1951), Urea (1959), Ammonium NitrateSulphate commonly known as Double Salt (1959) and was the first fertilizer factory to have its own captive power plant (1951) and to introduce planning, research and development facilities in 1951.Raw materials used were Gypsum. Coal and Naptha.
115. (A) Bats use ultrasonic sound for navigation. Their ability to catch flying insects while flying full speed in pitch darkness is astounding.Their sophisticated echolocation permits them to


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distinguish between a moth and a falling leaf.
116. (A) Persistence of vision is the theory where an afterimage is thought to persist for approximately one-sixteeth of a second on the retina and believed to be the explanation for motion perception. In a moving camera, each picture leads into the next one, so they blur together to make a single movie image. This is known as persistence of vision.
117. (C) The fuse wire works on the principle of Joules law of heating. The main objective of using fuse wire in electric circuit is to provide protection against short circuit or overloading of current. When large current passes in the circuits, the fuse wire burns and breaks the circuit. So, material used in fuse wire should have high resistance and low melting point. Due to high resistance wire heats up quickly, when huge current flows. The temperature around fuse wire rapidly rises, it reaches to the melting point of the material it burns and protects the circuit. Material used as fuse wire is an alloy of tin and lead.
119. (D) In 1951, Edward Teller invented Hydrogen Bomb. It is a weapon that uses a mixture of fission and fusion to produce a massive explosion.
124. (C) Hydrolysis is degradation of chemical bond by the addition of water. When a carbohydrate is broken into its component sugar molecules by hydrolysis like sucrose broken down into glucose and fructose, this is termed as saccharification.
125. (C) Refrigeration is a process of moving heat from one location to another. The heat transport is driven by mechanical work, magnetism, electricity, laser etc. Its applications are-household refrigerators, industrial frezers, cryogenics and air conditioning.Refrigeration slows bacterial action to a crawl so that it takes food much longer to spoil.
128. (B) Chloromycetin is used in the treatment of infections caused by bacteria. It works by killing bacteria or preventing their growth.
133 (C) Alfalfa is a common flowering perennial plant that originated in Asia. It is a nutrient rich food, high in chlorophyll, vitamins and micronutrients. Eating alfalfa or alfalfa sprouts offers the advantage of more protein than in most plants. It is rich in vitamins A, B1, B6, $\mathrm{C}, \mathrm{E}$ and K as well as in Calcium, Potasium, Iron and Zinc.
138. (C) The first Factory Act was passed in 1881 in the tenure of Lord Rippon to prohibit child labour.
Lord Rippon (1880-1884)-
(i) He repealed the Vernacular Press Act in 1882.
(ii) Age for entry in civil services was again raised to 21 years.
(iii) He passed Local Self Government Act in 1882.
(iv) He introduced Ilbert Bill in 1883.

He was also known as Father of Local Self Government in India.
139. (D) Ramanuja (1060-1118) - The earliest exponent of the Bhakti Movement was Ramanuja. He established Vaishnavism on a sound foundation. He founded visistadvaita Siddhanta or qualified monism and according to him, the way to salvation lies through karma, Gyan and Bhakti. He wrote Sribasya and Gita Bhasya.
141. (B) Kathakalli, Kuchipudi and Bharatnatyam are classical dances and Bhangra is a folk dance of Punjab region.
$\Rightarrow$ Bharatnatyam is the oldest classical dance forms in India. Mainly practiced in the present day region of Tamil Nadu.
$\Rightarrow$ Kathakalli is practiced in Kerala.
$\Rightarrow$ Kuchipudi in the state of Andhra Pradesh
147. (B) The DOT (Department of Telecom) has formed a panel to examine economic impact of implementation of netneutrality principle on the sector, to charge extra for voice call services like Skype and Viber. Net neutrality principle says that access to Internet or any Internet based service should be without any barrier or discrimination. A six member committee is formed under A.K Bhargava to examine pursuit of net neutrality from public policy objective, its advantages and limitations.
148. (C) The New Development Bank (NDB) formerly referred to as BRICS Development Bank. The bank is set up to foster greater financial and development cooperation among the fine emerging markets. On May 11, 2015 K. V Kamath was appointed as President of the Bank. He has served as the chairman of Infosys Limited, the second largest Indian IT service company and as the Non-Executive Chairman of ICICI Bank
149. (B) During 11 th five year plan, a new state plan scheme of Additional Central Assistance (ACA) for agriculture and allied sectors, namely RKVY (Rashtriya Krishi Vikas Yojana) was launched during 2007-2008.

## MEANINGS IN ALPHABETICAL ORDER

## Word

Abstemious
Accomplish
Anecdotes
Calligraphy
Cease
Chimerical
Console
Coffle
Conspicuous
Cortege
Day in，day out
Disinclination
Do not hold water Not correct or true

Erudite
Exodus

Hieroglyphics
Judicious
Laconic
Overhaul
Painstaking
Plaintiff
Proliferate
Propensity
Refute
Revel
Sacrilegious
seize
Serene
Stalemate
Stifle
Stumble
Superstition
Tamper
To bring home
Transfuse

Duplicity Contradictory doubleness of thought，speech or action
Meaning in English
not eating and drinking too much／marked by restraint to succeed in doing
a short story about an interesting event
the art of beautiful handwriting to stop doing
fantastically visionary or improbable
to alleviate the grief，sense of loss etc
a train of slaves
Very easy to see or notice a group of attendants
for an indefinite number of successive days
A feeling of not wanting to do something having knowledge learned by studying
a situation in which many people leave a place at the same time
written in or constituting pictorial character wise
using few words in speech or writing to change completely in order to improve it Thorough and rigorous
One who files suits
to increase in number or amount quickly
a strong natural tendency to do something
to prove that（something）is not true
Merriment
Showing lack of respect
to confiscate
calm and peaceful
deadlock
to kill by depriving of oxygen
to walk in awkward way
a belief or practice resulting from ignorance，fear of unknown
to interfere so as to weaken
To make unmistakably clear
To take from one person or animal and put it into another

Meaning in Hindi
vYi lgkh＠i jgs
dkZiQ gsk
y？d肘
I g｜kiudhdyk
：duk
d A If fud

cfar lsolkl egy
i ${ }^{2}$ 的
UlSjEpldj dkl egl
db주ulerd yxklk
nolk lou
I ghuga
diV
forth
fuxau］dpl
fplyyfilsafir
I exrlj
vYi\＆\＆
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egur HKk
villk｜lor

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［ HA djuk
［ lkh
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t氏 djuk
＇ ka
xfrjl\＄
ne ？ 1 dk
yM M M M $k$
vafo＇olk NBHHkchdjuk
Bld idlik I sle＊ck


## SSC MOCK TEST -2 (ANSWER KEY)

| 1. (A) | 26. (A) | 51. (C) | 76. (B) | 101. (C) | 126. (C) | 151. (B) | 176. (A) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2. (D) | 27. (B) | 52. (B) | 77. (C) | 102. (C) | 127. (C) | 152. (A) | 177. (A) |
| 3. (C) | 28. (B) | 53. (B) | 78. (B) | 103. (A) | 128. (B) | 153. (C) | 178. (C) |
| 4. (C) | 29. (B) | 54. (B) | 79. (A) | 104. (B) | 129. (A) | 154. (B) | 179. (D) |
| 5. (C) | 30. (B) | 55. (C) | 80. (B) | 105. (D) | 130. (A) | 155. (B) | 180. (B) |
| 6. (B) | 31. (A) | 56. (C) | 81. (A) | 106. (C) | 131. (B) | 156. (C) | 181. (A) |
| 7. (D) | 32. (C) | 57. (C) | 82. (A) | 107. (D) | 132. (C) | 157. (A) | 182. (C) |
| 8. (D) | 33. (D) | 58. (D) | 83. (D) | 108. (D) | 133. (C) | 158. (A) | 183. (D) |
| 9. (C) | 34. (D) | 59. (C) | 84. (D) | 109. (C) | 134. (C) | 159. (D) | 184. (C) |
| 10. (D) | 35. (A) | 60. (B) | 85. (B) | 110. (B) | 135. (C) | 160. (C) | 185. (C) |
| 11. (C) | 36. (B) | 61. (D) | 86. (A) | 111. (C) | 136. (C) | 161. (A) | 186. (C) |
| 12. (A) | 37. (A) | 62. (B) | 87. (D) | 112. (B) | 137. (A) | 162. (C) | 187. (B) |
| 13. (C) | 38. (D) | 63. (C) | 88. (C) | 113. (A) | 138. (C) | 163. (B) | 188. (A) |
| 14. (D) | 39. (B) | 64. (C) | 89. (D) | 114. (D) | 139. (D) | 164. (B) | 189. (D) |
| 15. (D) | 40. (D) | 65. (C) | 90. (B) | 115. (A) | 140. (A) | 165. (B) | 190. (A) |
| 16. (D) | 41. (C) | 66. (C) | 91. (D) | 116. (A) | 141. (B) | 166. (B) | 191. (A) |
| 17. (D) | 42. (D) | 67. (C) | 92. (C) | 117. (C) | 142. (B) | 167. (B) | 192. (D) |
| 18. (B) | 43. (C) | 68. (A) | 93. (B) | 118. (C) | 143. (D) | 168. (C) | 193. (B) |
| 19. (C) | 44. (B) | 69. (C) | 94. (A) | 119. (D) | 144. (A) | 169. (B) | 194. (A) |
| 20. (B) | 45. (C) | 70. (D) | 95. (C) | 120. (A) | 145. (A) | 170. (A) | 195. (C) |
| 21. (C) | 46. (C) | 71. (C) | 96. (C) | 121. (C) | 146. (C) | 171. (B) | 196. (A) |
| 22. (C) | 47. (B) | 72. (C) | 97. (A) | 122. (A) | 147. (B) | 172. (C) | 197. (A) |
| 23. (D) | 48. (C) | 73. (C) | 98. (B) | 123. (C) | 148. (C) | 173. (D) | 198. (C) |
| 24. (C) | 49. (B) | 74. (C) | 99. (C) | 124. (C) | 149. (B) | 174. (A) | 199. (D) |
| 25. (C) | 50. (C) | 75. (C) | 100. (D) | 125. (C) | 150. (B) | 175. (A) | 200. (B) |

151. (B); Use 'do not hold' water instead of 'hold no water'.We need to use the correct phrase. 'Do not hold water' means 'not correct or true'.
152. (B); 'Bring home to' is the correct phrase which means 'to make unmistakably clear'.
153. (C); 'Had been tranfused with blood' must replace 'was transfused'. The action that takes place first must be in Past Perfect Tense.
154. (B); 'both his hands' must replace 'his both hands'.
155. (B); 'Kept' must be changed into 'kept on' which means 'to continue'.

## Correction of Mock Test-1

61 (D); Solution correct, key wrong. 150 (A);

Note:- If you face any problem regarding result or marks scored, please contact 9313111777

Note:- If your opinion differs regarding any answer, please message the mock test and question number to 8860330003

