## SSC MOCK TEST - 20 (SOLUTION)

1. (C) As peacock is the national bird of India, similarly Bear is the national animal of Russia.
2. (B)


Similarly,

3. (B) As Diamond is made of Carbon, similarly Ruby is made of Corundum.
4. (C) As safe and secure have the same meaning in the same way protect and guard have the same meaning.
5. (C) The result of Race is Fatigue, similarly the result of Fast is Hunger.
6. (D) A Priest wears Cassock while a Graduate wears Gown.
7. (A)


Similarly,

8. (A)


Similarly,

9. (C) As,

10. (B)
11. (C) All except Rice are rabi crops, while rice is a kharif crop.
12. (C) All except Hawk are mammals.
13. (B) Resin is the only product in the group which is obtained from trees.
14. (A) All except Oats are weeds
15. (B) In each number except 427, the middle digit is the sum of other two.
16. (B) Each of the numbers except 72 is a perfect square.
17. (A) In each number except 751, the middle digit is the difference of other two.
18. (D) Mirror image of H is same whereas mirror image of others are different.
19. (D)


Hence required direction is South-West.
20. (B) Tall, thin, and middle-aged are the most appropriate way of defining a person.
21 (B)

22. (D) $8 \times 1-2=6$
$6 \times 2-3=9$
$9 \times 3-4=23$
$23 \times 4-5=87$
$87 \times 5-6=429$
23. (A)

24. (A)
25. (C) $\mathrm{R}>\mathrm{G}$
$\mathrm{N}>\mathrm{R}>\mathrm{G}$
$\mathbf{N}>\mathrm{R}>\mathrm{K}>\mathrm{G}$
Here, we have used
$\mathrm{N}=$ Nalin, $\mathrm{G}=$ Giridhar, $\mathrm{R}=$ Randhir and
$\mathrm{K}=$ Kishan
26. (A)


Hence, finally Sujata is facing North.
27. (B) Looking at the diagram in rows, the number in the central circle equals half the sum of the numbers in the other circles.
28. (A) $1^{2}=1,2^{2}=4,3^{2}=9, \mathbf{4}^{2}=\mathbf{1 6}$, $5^{2}=25,6^{2}=36,7^{2}=49,8^{2}=64,9^{2}=81$
29. (C) The sum of the numbers in each column is always 14 .
So, we have
$2+4+4+?=14$
$\Rightarrow$ ? $+10=14$
$\Rightarrow ?=4$
30. (A) Moving clockwise, around alternate segments in the chain, one sequence decreases by 1, 2, 3 and 4 respectively, while the other increases by 2, 3, 4 and 5 respectively, then
$?=11+5$
$=16$
31. (A) Since the statement talks about putting the child in school at the age of 5, it means that the child is mentally prepared for the same at this age. So, I is implicit. But nothing about admission after 6 years of age is mentioned in the statement. So, II is not implicit.
32. (A) If Gita is sitting at Harish left, Gita's seat is 252 . The next seat to the left, then, is 251.

Their seat numbers are-
Isha $=251$, Gita $=252$, Harish $=253$
and Mala $=254$
33. (D) $M \times N \rightarrow M$ is the father of $N$
$\mathrm{N}-\mathrm{C} \rightarrow \mathrm{N}$ is the sister of C
and $\mathrm{C}+\mathrm{F} \rightarrow \mathrm{C}$ is the brother of F .
Hence, $M$ is the father of $C$ or $C$ is the son of $M$.
34. (D) The man in the photo is the son of the
sister of Bajpai. Hence, Bajpai is the maternal uncle of the man in the photograph.
35 (C) On 31 ${ }^{\text {st }}$ December, 2005 it was Saturday. Number of odd days from the year 2006 to the year $2009=(1+1+2+1)=5$ days.
$\therefore$ On $31^{\text {st }}$ December 2009, it was Thusday. Thus, on 1st Jan, 2010 it was Friday.
36. (A)
37. (A)


$$
\text { I. } 3
$$

II. 5
38. (C)
39. (A) 55 min . spaces are covered in 60 min . 60 min . spaces are covered in
$\left(\frac{60}{55} \times 60\right) \min =65 \frac{5}{11} \mathrm{~min}$.
Loss in $64 \mathrm{~min} .=\left(65 \frac{5}{11}-64\right)=\frac{16}{11} \mathrm{~min}$.
Loss in $24 \mathrm{hrs} .=\frac{16}{11} \times \frac{24 \times 60}{64}$
$=\frac{360}{11}=32 \frac{8}{11} \mathrm{~min}$.
40. (B)
41. (D)
42. (C) In a usual die, the sum of the numbers on any two opposite faces is always 7. Thus, 1 is opposite to 6,2 is opposite to 5 and 3 is opposite to 4 .
Consequently, when $4,3,1$ and 5 are the number on the top faces, then $3,4,6$ and 2 respectively are the numbers on the face touching the ground.
The total of these numbers $=3+4+6+2$

$$
=15 .
$$

43. (B) M U S C L E-Word $\begin{array}{llllll}5 & 6 & 4 & 1 & 3 & 2 \text { - Numbers }\end{array}$
44. (A) The alphabets are coded as shown:

| T | W | E | N | Y | L | V |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8 | 6 | 3 | 9 | 5 | 2 | 0 |

So, In TWELVE,
T is coded as 8 ,
W as 6,
E as 3,
L as 2,
V as 0 .
Thus, the code for TWELVE is 863203.
45. (B) We drinks 'Water' when we are thirsty
and as given, 'Water' is called 'Air'.
46. (A)
$\begin{array}{ccc}2 & 3 & 4 \\ \downarrow & \downarrow & \downarrow \\ 2^{2} & +3^{2}+ & 4^{3}\end{array}$
$\begin{array}{ccc}3 & 4 & 5 \\ \downarrow & \downarrow & \downarrow \\ 3^{2} & +4^{2} & +5^{3}\end{array}$
$=4+9+64$
$=9+16+125$
$=77$
$=150$
$\begin{array}{lll}4 & 5 & 6 \\ \downarrow & \downarrow & \downarrow\end{array}$
$4^{2}+5^{2}+6^{3}=16+25+216=257$
47. (A) In the first and second statements, the common code word is 'nie' and the common word is 'some'.
So, 'nie' means 'some'.
In the first and third statements, the common code word is 'pie' and the common word is 'good'.
So, 'pie' means 'good'.
Also 'bie nie pie' means 'some good jokes'.
So, 'bi' means 'Jokes'.
48. (C) abc / aabc / aabbc / aabbcc /a.
49. (C) $\frac{\text { Open }}{(3)} \rightarrow \frac{\text { Type }}{(1)} \rightarrow \frac{\text { Save }}{(4)} \rightarrow \frac{\text { Print }}{(2)} \rightarrow \frac{\text { Close }}{(5)}$
50. (C)
51. (B) $\begin{aligned} \text { A }+\mathrm{B} & \longrightarrow 12 \\ \mathrm{~B} & \longrightarrow \mathrm{C} \longrightarrow 16\end{aligned}>48-4$


Remaining work done by C in 11 days.
$\therefore$ Efficiency of $\mathrm{C}=\frac{22}{11}=2$ unit
$\therefore$ Efficiency of $\mathrm{B}=1$
$\therefore$ Efficiency of $\mathrm{A}=3$
$\therefore A, B \& C$ can do it in $16,48,24$ days respectively
52. (D)

Population $\rightarrow 900: 800$ : 300 $\downarrow 80 \% \quad \downarrow 70 \% \quad \downarrow 90 \%$
Literate $\rightarrow \quad 720 \quad 560 \quad 270$
Total population $=(900+800+300)=2000$
Literate population $=(720+560+270)=1550$
Percent of literacy of the town $=\frac{1550}{2000} \times 100$
= $77.5 \%$
53. (C) Distance covered in 10 minutes at $20 \mathrm{~km} /$ $\mathrm{hr}=$ distance covered in 8 minutes at $(20+$ x) $\mathrm{km} / \mathrm{hr}$
$\Rightarrow 20 \times \frac{10}{60}=\frac{8}{60}(20+x)$
$\Rightarrow 200=160+8 x$
$\Rightarrow x=\frac{40}{8}=5 \mathrm{~km} / \mathrm{hr}$
54. (A) $25 \%=\frac{1}{4}$

|  | Salesman A | Salesman B |  |
| :--- | :---: | :---: | :---: | :---: |
| $\mathrm{CP} \rightarrow$ | $4_{\times 4}$ | $:$ | $3_{\times 5}$ |
| $\mathrm{SP} \rightarrow$ | $5_{\times 4}$ | $\leftarrow$ same $\rightarrow$ | $4_{\times 5}$ |
| Profit | $+1_{\times 4}$ | $:$ | $+1_{\times 5}$ |

Difference in profits $=(5-4)=1$ unit
1 unit = Rs. 100
Selling price $=20 \times 100=$ Rs. 2000
55. (C) Let the maximum marks be $x$.

According to question
$32 \%$ of $x+4=35 \%$ of $x-5$
$\Rightarrow 3 \%$ of $x=9$
$\Rightarrow x=9 \times \frac{100}{3}$
$\Rightarrow$ maximum marks $x=300$.
56. (A) $121 a^{2}+64 b^{2}$
$=(11 a)^{2}+(8 b)^{2}$
$\because(x+y)^{2}=x^{2}+y^{2}+2 x y$
$\therefore$ Required expression
$=2 \times 11 a \times 8 b=176 a b$
57. (A) According to the question,
$1 \mathrm{C}-1 \mathrm{~T}=400$
And,
$6 \mathrm{C}+6 \mathrm{~T}=4800$
$1 \mathrm{C}+1 \mathrm{~T}=800$
Solving (1) and (2) we get
Price of chair $=600$
Price of table $=200$
Required percentage $=\frac{600-200}{600} \times 100$
$=\frac{400}{6} \%=\frac{200}{3} \%$
58. (A) Length of temple $=l \mathrm{~m}$

Length of boat $=20 \mathrm{~m}$
Speed of boat in still water $=40 \mathrm{~km} / \mathrm{h}$
Speed of stream $=4 \mathrm{~km} / \mathrm{h}$ (Given)
Upstream speed $=(40-4)=36 \mathrm{~km} / \mathrm{h}$
from question, $\mathrm{t}=\frac{\mathrm{D}}{\mathrm{V}} \Rightarrow 10=\frac{(l+20) \times 18}{36 \times 5}$
$l+20=100 \Rightarrow l=80 \mathrm{~m}$
59. (A) Relative speed $=11-10$
$=1 \mathrm{~km} / \mathrm{hr}=\frac{5}{18} \mathrm{~m} / \mathrm{s}$
$\therefore$ Distance decreased in 6 minutes
$=\frac{5}{18} \times 6 \times 60=100 \mathrm{~m}$
$\therefore$ Distance remained between them
$=200-100=100 \mathrm{~m}$
60. (C) $15 \%=\frac{3}{20} \mathrm{CP}=20, \mathrm{SP}=23$

According to the question,
23 units = Rs. 6900
1 unit = 300
20 units $=300 \times 20=6000$
CP = Rs. 6000

$\therefore$ Percent profit $=\frac{480}{7800} \times 100=6.15 \%$
61. (C) Expression
$=\frac{4 x^{3}-x}{(2 x+1)(6 x-3)}$
$=\frac{x\left(4 x^{2}-1\right)}{(2 x+1) \times 3(2 x-1)}$
$=\frac{x(2 x+1)(2 x-1)}{3(2 x+1)(2 x-1)}$
$=\frac{x}{3}=\frac{9999}{3}=3333$
62. (A)

$$
25 \%=\frac{1}{4}
$$

Price of rice $\qquad$ $\rightarrow \quad 4$ $\qquad$

$\therefore$ increased price
$\Rightarrow \frac{400}{80}=₹ 5 / \mathrm{kg}$
63. (B)

$A+B+C \rightarrow \frac{9}{2}$
$\therefore \frac{120}{\frac{9}{2}}=\frac{120 \times 2}{9}=\frac{80}{3}$
$\Rightarrow 26 \frac{2}{3}$ days
64. (A) Let the numbers be $x, 2 x, 4 x$ respectively ATQ,
$\frac{x+2 x+4 x}{3}=28$
$7 x=84$
$x=12$
$\therefore$ the third numbers is $=4 \times 12=48$
65. (A) $\mathrm{A}+\mathrm{B}+\mathrm{C}=` 150 /$ day
$A+C=-94 /$ day
$B+C=-76 /$ day
$\therefore$ daily income of $\mathrm{A}=150-76=74$
daily income of $\mathrm{C}=94-74=20$
66. (A) $\mathrm{A} \rightarrow 10$

$\because$ If C was not opened then tank will be filled in 6 hours
$\therefore$ C workes for 6 hour and empty 18 litres water

Now tank will be filled in $\Rightarrow \frac{18}{10}=\frac{9}{5}$
$\Rightarrow 1 \frac{4}{5}$ hours.
67. (C) Let the total number of Books $=x$ According to the question,
$x \times \frac{60}{100} \times \frac{20}{100}=300 \Rightarrow x=2500$
68. (B) $x^{4}-17 x^{3}+17 x^{2}-17 x+17$
$x^{4}-16 x^{3}-x^{3}+16 x^{2}+x^{2}-16 x-x+17$
When $x=16$,
$x^{4}-x^{4}-x^{3}+x^{3}+x^{2}-x^{2}-x+17=1$
69. (B) Total age of all boys along
with the teacher $\rightarrow(24+1) \times 15=375$ years
Total age of all boys excluding
The teacher $=24(15-1)$
$=336$ years
$\therefore$ The age of the teacher $=375-336$
= 39 years
70. (C) Total interset $=(6500+9260)-12000$
$=$ - 3760
$\therefore \frac{12000 \times 3 \times r}{100}+\frac{12000-6500 \times 2 \times r}{100}$
$=3760$
$360 r+110 r=3760$
$470 r=3760$
$r=8 \%$
71. (B) Ratio of Cost of Manufacturing Material : Labour : Over Total heads Cost

| 4 | $:$ | 3 |  |
| :--- | :--- | :--- | :--- |
| $\downarrow \times 15$ |  | $\downarrow \times 15$ <br> 60 | 45 |

$\therefore$ percent profit $=\frac{(180-135)}{135} \times 100=\frac{45}{135} \times 100$
$=33.33 \%$
72. (D) $\frac{8}{10}=\frac{1}{10}$ taken

| $\therefore$ | Mixture | - | Milk |
| :---: | :---: | :---: | :---: |
| 10 | - | 9 |  |
| 10 | - | 9 |  |
| 10 | - | 9 |  |
|  |  |  |  |
|  | $\downarrow \times \frac{2}{25}$ |  | 729 |
|  |  | $\downarrow \times \frac{2}{25}$ |  |
|  |  | 58.32 litre |  |

73. (B) Volume of the tank $=(3 \times 5 \times 1.54) \mathrm{cu}$. metre
Volume of water flowing through pipe per second

$$
=\pi \times\left(\frac{7}{100}\right)^{2} \times 5 \mathrm{~m}^{3}
$$

Required time $=\frac{3 \times 5 \times 1.54 \times 100 \times 100 \times 7}{22 \times 7 \times 7 \times 5}$
$=300$ seconds
= 5 minute
74. (D) Average legs $/$ head $=\frac{580}{200}=2.9$

Rabbits
Pigeons
(Legs) 4 2 (Legs)

$\therefore$ No. of rabbits $=\frac{9}{20} \times 200=90$
75. (C) $3 x+4 y=12$

$\frac{1}{2} \times 3 \times 4$

$$
=6 \text { sq. units }
$$

76. (A) $(3 a+1)^{2}+(b-1)^{2}+(2 c-3)^{2}=0$

$$
\Rightarrow 3 a+1=0
$$

$\Rightarrow 3 a=-1$
$b-1=0$
$\Rightarrow b=1$
$2 c-3=0$
$\Rightarrow 2 c=3+$
$\therefore 3 a+b+2 c=-1+1+3=3$
77. (A) $10 \%=\frac{1}{10}, 20 \%=\frac{1}{5}, 5 \%=\frac{1}{20}$

78. (C)


D is the mid-point of AB and E is the midpoint of AC.
$\therefore \mathrm{DE}$ is parallel to BC .
and $\mathrm{DE}=\frac{1}{2} \mathrm{BC}$
$\triangle \mathrm{ADE}$ and $\triangle \mathrm{ABC}$ are similar, because
$\underline{\mathrm{D}}=\underline{B}$ and $\underline{E}=\underline{C}$
$\therefore \frac{\operatorname{ar}(\triangle \mathrm{ADE})}{\operatorname{ar}(\triangle \mathrm{ABC})}=\frac{\mathrm{DE}^{2}}{\mathrm{BC}^{2}}=\frac{1}{4}$
$\Rightarrow 4 \operatorname{ar}(\triangle \mathrm{ADE})=\operatorname{ar}(\triangle \mathrm{ABC})$
$\therefore$ Area of trapezium DBCE
$=\operatorname{ar}(\triangle \mathrm{ABC})-\operatorname{ar}(\triangle \mathrm{ADE})$
$4 \operatorname{ar}(\triangle \mathrm{ADE})-\operatorname{ar}(\triangle \mathrm{ADE})=3 . \operatorname{ar}(\triangle \mathrm{ADE})$
$\therefore$ Required percentage
$=\frac{3}{4} \times 100=75 \%$
79. (D)

$\therefore$ Age of her son $=\frac{36}{12}$
$\Rightarrow 3$ years
80. (B)


In $\triangle A P D$ and $\triangle A O C$
$\frac{\mathrm{AP}}{\mathrm{AO}}=\frac{\mathrm{PD}}{\mathrm{OC}}[\because \Delta \mathrm{APD} \cong \Delta \mathrm{AOC}]$
$\mathrm{PD}=\frac{\mathrm{AP} \times \mathrm{OC}}{\mathrm{AO}}=\frac{12 \times 7}{24}=3.5 \mathrm{~cm}$
$\therefore$ Volume $=\frac{1}{3} \pi r^{2} \times h$
$=\frac{1}{3} \times \frac{22}{7} \times 3.5 \times 3.5 \times 12$
$=154 \mathrm{~cm}^{3}$
81. (D) Area of the floor

$$
\frac{\text { Volume of the room }}{\text { Height of the room }}
$$

$=\frac{204}{6}=34$ sq. m.
82. (A)


$$
\begin{aligned}
& \angle \mathrm{ACD}=180^{\circ}-\angle \mathrm{ACB} \\
& =180^{\circ}-72^{\circ}=108^{\circ}
\end{aligned}
$$

$\angle \mathrm{CAD}=\angle \mathrm{ADC}=\frac{72}{2}=36^{\circ}$
$\therefore \angle \mathrm{ABC}=180^{\circ}-109^{\circ}-36^{\circ}$
$=35^{\circ}$
83. (D) Amount A after 3 years = Amount B after 5 years
$\therefore \mathrm{A}\left(1+\frac{4}{100}\right)^{3}=\mathrm{B}\left(1+\frac{4}{100}\right)^{5}$
$\therefore \frac{A}{B}=\left(\frac{26}{25}\right)^{2}=\frac{676}{625}$
Therefore, $(676+625)$ units $=₹ 390300$
$\therefore 1$ unit $=300$
Amount deposited in A's account
$=300 \times 676$
$=202800$
Amount deposited in B's account
$=300 \times 625$
$=187500$
84. (C) $\frac{360}{n-1}-\frac{360}{n+2}=6$

$$
\Rightarrow 360\left[\frac{n+2-n+1}{(n-1)(n+2)}\right]=6
$$

$\Rightarrow(n-1)(n+2)=180$
$=n^{2}+n-2=180$
$n^{2}+n-2=180$
$n^{2}+14 n-13 n-182=0$
$n(n+14)-13(n+14)=0$
$(n+14)(n-13)=0$
$n=13, n=-14$
$\because(n \neq-14)$
85. (C) $\frac{2 \sin 68^{\circ}}{\cos 22^{\circ}}-\frac{2 \cot 15^{\circ}}{5 \tan 75^{\circ}}-\frac{3 \tan 45^{\circ} \cdot \tan 20^{\circ} \cdot \tan 40^{\circ} \cdot \tan 50^{\circ} \cdot \tan 70^{\circ}}{5}$

$$
=\frac{2 \sin \cos 22^{\circ}}{\cos 22^{\circ}}-\frac{2 \cot \left(90^{\circ}-75^{\circ}\right)}{5 \tan 75^{\circ}}-
$$

$3 \times 1 \times \tan \left(90^{\circ}-70^{\circ}\right) \tan \left(90^{\circ}-40\right) \tan 50^{\circ} \tan 70^{\circ}$
5
$=\frac{2 \cos 22^{\circ}}{\cos 22^{\circ}}-\frac{2 \tan 75^{\circ}}{5 \tan 75^{\circ}}-\frac{3 \cot 70^{\circ} \cot 50^{\circ} \tan 50^{\circ} \tan 70^{\circ}}{5}$
$=2-\frac{2}{5}-\frac{3}{5} \quad[\because \cot \theta \tan \theta=1]$
$=\frac{10-2-3}{5}=\frac{5}{5}=1$
86. (B)


$$
\begin{aligned}
& \mathrm{OD}=\sqrt{15^{2}-12^{2}} \\
& =\sqrt{225-144} \\
& =\sqrt{81}=9
\end{aligned}
$$

$\mathrm{O}^{\prime} \mathrm{D}=\sqrt{13^{2}-12^{2}}$
$=\sqrt{169-144}=\sqrt{25}=5$
$\therefore \mathrm{OO}^{\prime}=9+5=14 \mathrm{~cm}$
87. (B)

$\angle \mathrm{BOC}=90^{\circ}+\frac{\angle A}{2}$
$\therefore \frac{\angle A}{2}=\angle \mathrm{BOC}-90^{\circ} \Rightarrow \frac{\angle A}{2}=102-90^{\circ}$
$\angle \mathrm{A}=24^{\circ}$
88. (A) C.I $=P\left[\left(1+\frac{r}{100}\right)^{n}-1\right]$
$5044=32000\left[\left(1+\frac{r}{100}\right)^{3}-1\right]$
$\frac{5044}{32000}+1=\left(1+\frac{r}{100}\right)^{3}$
$\sqrt[3]{\frac{37044}{32000}}=1+\frac{r}{100}$
$\frac{21}{20}-1=\frac{r}{100}, r=\frac{1}{20} \times 100=5 \%$
Annual rate $\%=5 \times 4=20 \%$
89. (C) Required value $=\frac{\sqrt{7}+\sqrt{5}}{\sqrt{7}-\sqrt{5}}+\frac{\sqrt{7}-\sqrt{5}}{\sqrt{7}+\sqrt{5}}$
$=\frac{(\sqrt{7}+\sqrt{5})^{2}+(\sqrt{7}-\sqrt{5})^{2}}{(\sqrt{7}-\sqrt{5})(\sqrt{7}+\sqrt{5})}$
$=\frac{12+2 \sqrt{35}+12-2 \sqrt{35}}{7-5}$
$=\frac{24}{2}=12$
90. (A) ATQ,
$x+y=22$ and $x^{2}+y^{2}=404$
$\therefore(x+y)^{2}=x^{2}+y^{2}+2 x y$
$(22)^{2}=404+2 x y$
$2 x y=484-404=80$
$x y=40$
91. (A) Profit Ratio of A, B and C
$=(5 \times 12):(7 \times 12)+:\left(6 \times 6+\frac{6}{2} \times 6\right)$
$=60: 84: 54$
$=10: 14: 9$
$\therefore$ Share of C in the Profit $=\frac{9}{33} \times 33000$
$=` 9000$
92. (A) $x \times \frac{1}{\sqrt{2}}=y \times 2$
$\Rightarrow \frac{x}{y}=2 \sqrt{2}$
$\Rightarrow \frac{x^{4}}{y^{4}}=(2 \sqrt{2})^{4}=2^{4} \times 2^{2}$
$\Rightarrow 2^{6}=4^{3}$
93. (B) The sum of two sides of a triangle should be greater than the third side.
$\therefore$ Two triangle are possible with sides
$(3,5,6)$ and $(2,8,6)$
94. (B)

$\mathrm{DE}=36-24=12 m$
From $\triangle \mathrm{ADE}$
$\sin 60^{\circ}=\frac{\mathrm{DE}}{\mathrm{AD}}$
$=\frac{\sqrt{3}}{2}=\frac{12}{\mathrm{AD}}$
$\Rightarrow \mathrm{AD}=\frac{12 \times 2}{\sqrt{3}}$
$=8 \sqrt{3} \mathrm{~m}$
95. (C) $\cos x+\cos ^{2} x=1$
$\Rightarrow \cos x=1-\cos ^{2} x=\sin ^{2} x$
$\therefore \sin ^{12} x+3 \sin ^{10} x+3 \sin ^{8} x+\sin ^{6} x-1$
$=\left(\sin ^{4} x+\sin ^{2} x\right)^{3}-1$
$=\left(\cos ^{2} x+\sin ^{2} x\right)^{3}-1$
$=1-1=0$
96. (B) Required sales
$=\cdot(1773+1115)$ crore
$=$ - 2888 crore
97. (A) 10
98. (A) 2
99. (B) Required average

2007, OUTRAM LINES, 1ST FLOOR, OPPOSITE MUKHERJEE NAGAR POLICE STATION, DELHI-110009
$=\frac{8730+924}{2}$
$=\frac{9654}{2}=-4827$ crores
100. (B) Required difference
$=`(5345-1841)$ crores
= - 3504 crore
102. (A) Although tropical forests cover less than $7 \%$ of the earth's surface they are home to approximately $50 \%$ of all living things on earth.
103. (C) Cut motion is a veto power given to the members of the Lok Sabha to oppose a demand in the financial bill discussed by the government. This can turn into an effective tool to test the strength of the government. If a cut motion is adopted by the House and the government does not have the numbers, they are obliged to resign.
104. (D) Panini was a Sanskrit grammarian from Pushkalavati, Gandhara. He was known for his Sanskrit grammar (particularly for his formulation of 3,959 rules of Sanskrit morphology). His syntax and semantics is known as Ashtadhyayi (eight chapters).
105. (A) Shri Gemini Roy (April 1887 - April 1972): an Indian painter.
Bhuvneshwari Kumari: a former woman squash champion of India.
Qureshi Alla Rakha Khan: popularly known as All Rakha (29 April 1919-3 February 2000) was an Indian tabla player.

Medha Patkar: An Indian environmental activist.
106. (D) Population Density of India is 382 per sq km as per census 2011. Bihar is the densest state of India with a population density of 1102 , followed by West Bengal with 1030 persons per square kilometre; whereas for Kerala it is 859.
109. (B) In October, 1940, Gandhi selected Vinoba Bhave as his first spiritual successor for the individual Satyagraha against the British, and Jawaharlal Nehru was the second. Gandhi personally went to Pavnar Ashram to seek his consent. After obtaining Vinoba's consent, Gandhi issued a comprehensive statement on $5^{\text {th }}$ October, 1940.
111. (D) Since $R$ is directly proportional to length of the wire.
When wire is cut into equal parts, then

Resistance of each part $=\mathrm{R} / \mathrm{n}$
When the wires are connected in parallel, then the equivalent resistance of combination is
$1 / R_{2}=n / R+n / R+n / R \ldots n$ times
$\Rightarrow 1 / \mathrm{R}_{2}=\mathrm{n}^{2} / \mathrm{R}$
$\Rightarrow R_{2}=R / n^{2}$
112. (D) The Maasai people of East Africa live in southern Kenya and northern Tanzania along the Great Rift Valley on semi-arid and arid lands. Livestock such as cattle, goats and sheep are the primary source of income for the Maasai.
113. (C) Looping is used in programming to save the tedium of many repetitive tasks. One of the main uses of loops in programs is to carry out repetitive tasks. A loop executes one or more lines of code (statements) as many times as one wants.
120. (A) Materials for rain proof coats and tents owe their water proof properties to Surface Tension.
121. (A) Part I of the Constitution of India describes the nation that is Bharat, shall be a Union of States. It also mentions that the states and the territories shall be specified in the First Schedule.
122. (C) The Sundarbans is the largest single block of tidal halophytic mangrove forest in the world. The Sundarbans is a UNESCO World Heritage Site covering parts of Bangladesh and the Indian state of West Bengal. The Sundarban forest lies in the vast delta on the Bay of Bengal formed by the super confluence of the Padma, Brahmaputra and Meghna rivers across southern Bangladesh.
123. (B) Article 312 provides that an All India Service can be created only if the Council of States (Rajya Sabha) declares, by resolution supported by not less than a two-thirds majority, that it is necessary in the national interest to create one or more such All India Services. When once such a resolution is passed, the Parliament is competent to constitute such an All India Service.
125. (C) Technically, the largest organ in the body is the liver. Liver is also the heaviest organ, with an average of 1.6 kilograms (3.5 pounds). The largest organ of the body is the skin (the skin is 'outside' the body).
127. (C) State-owned Nuclear Power Corporation of India Limited (NPCIL) is setting up a 2,800 megawatt (MW) nuclear power plant between the villages of Kumharia and Gorakhpur, in the Fatehabad district of Haryana. It will be Haryana's first nuclear power plant.
130. (A) An isohel is line drawn on a map connecting points that receive equal amounts of sunlight. It is derived from helios, meaning 'Sun'.
131. (B) Animal adapted to life in air are called arboreal. Arboreal means living in or connected with trees.
133. (C) Lingaraj Temple is a Hindu temple dedicated to Harihara, another name for Shiva and is one of the oldest temples of Bhubaneswar, a revered pilgrimage center and the capital of Odisha. Shiva is here worshipped as Tribhuvaneshwara (Master of three worlds, i.e. Heaven, Earth and Netherworld). His consort is called Bhuvaneshvari. The temple is traditionally believed to be built by the Somavanshi king Jajati Keshari, in $11^{\text {th }}$ century CE.
137. (B) Typhoid fever, also known as typhoid, is a common worldwide bacterial disease, transmitted by the ingestion of food or water contaminated with an infected person, which contain the bacterium Salmonella Typhi, Serotype Typhi.
138. (C) Halite, commonly known as rock salt, is the mineral form of sodium chloride $(\mathrm{NaCl})$. Halite forms isometric crystals. It commonly occurs with other evaporite deposit minerals such as several of the Sulfates, Halides, and Borates.
140. (C) The President of India is the Supreme Commander of the Indian Armed Forces. The Indian Armed Forces are under the management of the Ministry of Defence (MOD), which is led by the Union Cabinet Minister of Defence.
141. (C) Some coins of the Gupta dynasty throw significant light on the personal events of certain rulers like Samudra Gupta. Some coins depict him playing veena which bears
out his love for music.
143. (C) An Optical Fiber works on the principle of Total Internal Reflection. Light rays are reflected and guided down the length of an optical fiber.The acceptance angle of the fiber determines which light rays will be guided down by the fiber.
147. (A) Tetanus is a medical condition which is characterized by a prolonged contraction of skeletal muscle fibers. The primary symptoms are caused by tetanospasmin, a neurotoxin produced by the Gram-positive, rod-shaped, obligate anaerobic bacterium Clostridium tetani which is a rod-shaped, anaerobic bacterium of the genus species Clostridium.
148. (C) The Gross Domestic income (GDI) is the total income received by all sectors of an economy within a nation. It includes the sum of all wages, profits, and taxes, minus subsidies. Since all income is derived from production (including the production of services), the gross domestic income of a country should exactly equal its gross domestic product (GDP).
149. (A) Emphysema is the common lung disease caused by asbestos. Emphysema is a lung condition in which tiny Air Sacs in the lungs - alveoli - fill up with air. As the air continues to build up in these sacs, they expand, and may break or become damaged and form scar tissue. The patient becomes progressively short of breath. Emphysema is a type of COPD (Chronic Obstructive Pulmonary Disease).
150. (A) World Health Day is celebrated every year on $7^{\text {th }}$ April, under the sponsorship of the World Health Organization (WHO). In 1948, the World Health Organization held the First World Health Assembly. The Assembly decided to celebrate $7^{\text {th }}$ April of each year, with effect from 1950, as the World Health Day.

## Word

Ubiquitous
Propitious
Hedonistic
Drastic
Cobblers
Gerontocracy
Oligarchy
Ochlocracy

Gibber
Clang
Bray
Moan
Blasphemous
Pious
Haggard
Knave
Facetious
Ingest
Devour
Aethetics
Amalgamation

Vigorously Facilitate
Anatomy
Alchemy

Bibliography
Anthropology
Anorexia
Agoraphobia
Aerophobia
Autophobia
onerous

Meaning in English
Seeming to be seen everywhere／universal
Presenting favourable circumstances；likely to result in or show signs of success
The belief that pleasure or happiness is the most important goal in life
Extreme in effect or action，severe or serious
A person who makes or repairs shoes
A state，society or group governed by old people
A political system governed by a few people
A political system in which a mob is the source of control， government by the masses
To talk in a fast or foolish way
Ringing sound of metal hitting against something
To utter a sound like a donkey
A long，low sound that someone makes because of pain， unhappiness，or physical pain
Grossly irreverent toward what is held to be sacred Having or showing reverence for a deity
Showing the wearing effects of overwork or care or suffering
A deceitful and unreliable scoundrel
cleverly amusing in tone
to take in for or as if for digestion
Eat greedily
The branch of philosophy dealing with
The act of putting two or more things together so that they form one
In a way that is very active，determinad or full of energy To make easier，be of use The scientific study of the structure of human or animal bodies A power or process that changes or transforms something in a mysterious or impressive way

A list of books，magazines，articles etc．that are mentioned in a text
The social science that studies the origins and social relationship of human beings
A prolonged disorder of eating due to loss of appetite
A morbid fear of open spaces
Fear or strong dislike of flying
Morbid rear of solitude
Needing great effort，causing trouble or worry

Meaning in Hindi
सर्म क य पे
अनु वू ग ल
सु ख वा दी，$\Psi$ 广 广 गी
ती क्ष्प，क्ठ T｀र
मा＇ची
वरिण्ठ ठ यक्तय＇का घ
कु ली नतं ラ
वह रा जी़ तिकप्र प $T$ ली ज
एकी ड़．द्वारा पा सि
मू ख ता पू प｀बा’ लन
ध तु अ ${ }^{\prime}$ की झं का र
रें का
सिस्कना，करा हना
ई $\quad$－निन दा पू प「
र्ध पा या，र्थ निष्ठ
था का－हा रा
धू त ，धं खो बा ज
मज किय
खा ना，निगलना
भा क्ष प करना，निगल जा
स゙ दर्य すाエラ
मिला वट，एकी करण
जो पु पू ढ‘ ग से
सु गम बना ना ，स्हजकरना
परी र－रचना विज्ञान
रस यम विध，जों वस्तु अँ
अ श्चर्य जाक स्स स उनके
मू लर क्र्मसे बिलक्कु लअलग
खमे स तरितक्रदे ती है
संद $\mathrm{T}^{\mathrm{T}}$ स सी
मा नव－すโ ※ラ
${ }^{9} \mathrm{TI}^{\prime}$ जा ठ यहारमें हु
खु ले ₹था丁 का 9 य

अके ले फ्म का 9 Tय
कठट स ध्य

## SSC MOCK TEST - 20 (ANSWER KEY)

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

151. (D) No error.
152. (B) Remove 'he'. Here, before the verb 'sat by', the noun is already given, which doesn't need a pronoun.
153. (C) 'Sank' is the appropriate word which means 'to cause (a ship or boat) go down below the surface of water'. Change 'got drowned' into 'sank'.
154. (C) Replace 'were' by 'was'. Here, the subject is 'the pursuit of the hare' which is singular. Hence the verb which has to agree with it should be singular.
155. (C) Change 'because' into 'that'. The reason why ....... because, is superflouus.

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

