## SSC MOCK TEST -5 (SOLUTION)

1. (A)
5.(C) ENGAGE
6.(A) SCATTER
2. (A)
3. (B)
4. (C)

$$
\begin{aligned}
2 & \rightarrow 1^{2}+1, \\
26 & \rightarrow 5^{2}+1
\end{aligned}
$$

$$
5 \rightarrow 2^{2}+1
$$

$677 \rightarrow 26^{2}+1$
$0 \rightarrow 1^{3}-1$,
$6 \rightarrow 2^{3}-2$,
$24 \rightarrow 3^{3}-3$,
$60 \rightarrow 4^{3}-4$,
$120 \rightarrow 5^{3}-5$
$210 \rightarrow 6^{3}-6$
$\mathbf{3 3 6} \rightarrow 7^{3}-7$
13. (D)
11.(B)
12. (C)
14. (A)
15.(D) All the rest are beasts of burden.
16.(D) All the rest are ornaments.
17.(C) One more letter is there.
18.(A) ECZEMA is a skin disease. Rest are related to eye.
19.(D) After dividing the number 59 by 8, we get 3 as remainder, where as in other cases we get 2 as remainder.
20.(D) 144 is a perfect square. Rest are perfect cubes.
21.(D)
22. (C)
23.(B) Kanna > Malik,

Krish > Dev
Krish > Veena > Malik
Dev > Veena
Krish > Dev > Veena > Malik
24.(D)
25.(D)
 Uncle
26.(B) Eye is related to Opthalmologist. Music is related to Composer.
27.(A) 'Germany' ends in 'many'. Similarly 'ireland' ends in 'land'.
28.(D) Word

Position in Alphabet

29.(A)

30.(A)

$$
\begin{aligned}
& \sqrt{01} \rightarrow 1,(\mathbf{1}+1)^{3}=2^{3}=8 \\
& \sqrt{16} \rightarrow 4,(\mathbf{4}+1)^{3}=5^{3}=\mathbf{1 2 5}
\end{aligned}
$$

31.(C) $B \rightarrow 2 \Rightarrow 2^{4}=16$ Similarly, $D \rightarrow 4 \Rightarrow 4^{4}=256$
32.(A)


We have, $\mathrm{AD}=\sqrt{100+25}=\sqrt{125} \mathrm{kms}$.
33.(C)


${\underset{\mathbf{P}}{ }}_{\mathrm{C}+1}^{\mathrm{O}}$



34. (C) Original price $=100$

Reduced Price $=75$
To make it 100 again increase $=25$
Increase $\%=\frac{\text { Increase }}{\text { Original }} \times 100$
$=\frac{25}{75} \times 100=\mathbf{3 3} \frac{\mathbf{1}}{\mathbf{3}} \%$
or,

$$
\frac{25 \times 100}{100-25}=\frac{25 \times 100}{75}=\frac{100}{3}=33 \frac{1}{3} \%
$$

35.(A)
36. (B)
37.(B) $6 \times 3-2=16$
38.(B) $15 \times 4=60, \quad 60 \times 4=240$
$25 \times 4=100 \quad 100 \times 4=400$
$30 \times 4=120 \quad 120 \times 4=480$
39.(A) $6 \times 3=18,7 \times 4=28,8 \times 5=40$
40.(B) $\mathrm{b} \underline{\mathrm{b}} \mathrm{cd} \underline{d d \underline{d} \mathrm{ccc} \mathrm{cdb} \underline{b}}$
41.(D) $\mathrm{ab} \underline{\mathrm{c}} d \mathrm{dab} \underline{\mathrm{b}} \mathrm{cd} \underline{\mathrm{a}} \mathrm{b} \mathrm{b} \underline{\mathrm{c}} \mathrm{d} \underline{a}$
42.(C)


$$
\mathrm{AC}=\sqrt{3^{2}+4^{2}}=5 \mathrm{~km}
$$

43.(A) $41+27+34=102 \xrightarrow{\text { reverse }} 201$ $19+63+48=130 \xrightarrow{\text { reverse }} 031$ $51+35+36=149 \xrightarrow{\text { reverse }} \mathbf{9 4 1}$ 44.(A) 45. (C) 46. (C) 47. (B) 48.(C) $6+4 \times 5 \div 2-1$

$$
=6+4 \times \frac{5}{2}-1=6+10-1=15
$$

49.(B)

$$
\begin{array}{lllllll}
\mathrm{M} \rightarrow \mathrm{Y} & & & & & & \\
\mathrm{O} \rightarrow \mathrm{O} & & & & & & \\
\mathrm{D} \rightarrow \mathrm{U} & & & & & & \\
\mathrm{E} \rightarrow \mathrm{~N} & & & & & & \\
\mathrm{R} \rightarrow \mathrm{G} & \mathrm{M} & \mathrm{E} & \mathrm{~T} & \mathrm{H} & \mathrm{O} & \mathrm{D} \\
\mathrm{~N} \rightarrow \mathrm{~S} & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\
& \mathbf{Y} & \mathbf{N} & \mathbf{B} & \mathbf{A} & \mathbf{O} & \mathbf{U}
\end{array}
$$

Letters used in
ORTHODOXY ORTHODOXY
other than MODERN

$$
\left\{\begin{array}{l}
\mathrm{T} \rightarrow \mathrm{~B} \\
\mathrm{H} \rightarrow \mathrm{~A} \\
\mathrm{X} \rightarrow \mathrm{M} \\
\mathrm{Y} \rightarrow \mathrm{~L}
\end{array}\right.
$$

50.(C)
51.(B) $15=2.1$; Difference between transport and taxes $=12.5-10=2.5$

$$
\begin{aligned}
1 & =\frac{2.1}{15} \\
2.5 & =\frac{2.1}{15} \times 2.5 \\
& =35 \text { Lakhs }
\end{aligned}
$$

52. (C) Infrastructure \& Transport $=20+12.5$

$$
=32.5
$$

Tax \& Interest on loan $=10+17.5$

$$
=27.5
$$

$$
\text { Ratio }=32.5: 27.5=13: 11
$$

53. (C) Advertisement + Taxes $+\mathrm{R} \& \mathrm{D}$

$$
\begin{aligned}
& =15+10+5=30 \\
17.5 & =2.45 \\
1 & =\frac{2.45}{17.5} \\
30 & =\frac{2.45}{17.5} \times 30 \\
& =4.2 \text { crores }
\end{aligned}
$$

54. (B) Required $\%=\frac{5.0}{12.5} \times 100=40 \%$
55. (D) $\mathrm{PT}^{2}$

$$
\begin{aligned}
& =\mathrm{PA} \times \mathrm{PB} \\
5^{2} & =4 \times(4+x) \\
\frac{25}{4} & =4+x \\
x & =\frac{9}{4} \mathrm{~cm}
\end{aligned}
$$

56. (A)

$P M+M Q=P Q$
$\mathrm{PM}=\mathrm{MQ}=9 \mathrm{~cm}$
$\mathrm{AM} \times \mathrm{MB}=\mathrm{PM} \times \mathrm{MQ}$
$\mathrm{AM} \times 3=9 \times 9$
$\mathrm{AM}=27$
$\mathrm{AB}=\mathrm{AM}+\mathrm{BM}$

$$
=27+3=30 \mathrm{~cm}
$$

57. (A) Total number of A type of employees in
$1998=48640 \times \frac{22}{100}=10700.80$
Let $\mathrm{X} \%$ of $42980=10700.80$
$42,980 \times \frac{X}{100}=10700.80$
X $=25 \%$ (Approx)
$\mathrm{C}+\mathrm{D}=10+15=25 \%$
So, C \& D will be answer
58. (B) Change in $\mathrm{C}=42980 \times \frac{10}{100} \sim 48640 \times \frac{11}{100}$

$$
\begin{aligned}
& =4298 \sim 5350.40 \\
& =\sim 1052.4
\end{aligned}
$$

Change in $B=42980 \times \frac{6}{100} \sim 48640 \times \frac{10}{100}$

$$
\begin{aligned}
& =2578.8 \sim 4864 \\
& =\sim 2285
\end{aligned}
$$

Change in $A=42980 \times \frac{20}{100} \sim 48640 \times \frac{22}{100}$

$$
\begin{aligned}
& =8596 \sim 10700.80 \\
& =\sim 2104.8
\end{aligned}
$$

Change in $D=42980 \times \frac{15}{100} \sim 48640 \times \frac{11}{100}$

$$
\begin{aligned}
& =6447 \sim 5350.40 \\
& =\sim 1096.6
\end{aligned}
$$

So, Maximum change in $B$ type of employees.
59. (C) In above solution we found that change in type B employee $=2285$
60. (B) Approximate percentage $=\frac{5000}{48640} \times 100$ = $10 \%$
61. (B) Type A employee in $1998=48640 \times \frac{22}{100}$

$$
=10700.80
$$

Type A employee in $1997=42980 \times \frac{20}{100}$

$$
=8596
$$

Required $\%=\frac{10700.80}{8596} \times 100$

$$
=124.48 \% \text { or } 125 \%
$$

62.(A) $2 \pi r=\frac{30}{\pi}$

$$
2 \mathrm{r}=\frac{30}{\pi \times \pi}=\frac{30}{\pi^{2}}
$$

63.(D) Total runs in 10 innings $=32 \times 10=320$

Total runs after next innings $=11 \times(32+6)$

$$
\begin{aligned}
& =11 \times 38 \\
& =418
\end{aligned}
$$

Hence;
Diff. $=418-320=98$
64. (C) $a^{2}+b^{2}+c^{2}=a b+b c+c a$

It is only posible when $a=b=c$

$$
\text { So, } \frac{a+c}{b}=\frac{a+a}{a}=2
$$

65.(B) $\cot \mathrm{A}+\operatorname{cosec} \mathrm{A}=3$
$\operatorname{cosec}^{2} \mathrm{~A}-\cot ^{2} \mathrm{~A}=1$
$(\operatorname{cosec} \mathrm{A}-\cot \mathrm{A})(\operatorname{cosec} \mathrm{A}+\cot \mathrm{A})=1$
$\operatorname{cosec} A-\cot A=\frac{1}{3}$
$+\operatorname{cosec} A+\cot A=3$
$2 \operatorname{cosec} \mathrm{~A}=\frac{10}{3}$
$\operatorname{coces} \mathrm{A}=\frac{5}{3}$
$\sin \mathrm{A}=\frac{3}{5}$
66. (A) $\sin ^{4} \theta+\cos ^{4} \theta=2 \sin ^{2} \theta \cdot \cos ^{2} \theta$
$\Rightarrow \sin ^{4} \theta+\cos ^{4} \theta-2 \sin ^{2} \theta \cdot \cos ^{2} \theta=0$
$\Rightarrow\left(\sin ^{2} \theta-\cos ^{2} \theta\right)^{2}=0$
$\Rightarrow \sin ^{2} \theta=\cos ^{2} \theta$
$\Rightarrow \sin \theta=\cos \theta$
$\Rightarrow \frac{\sin \theta}{\cos \theta}=1$
$\tan \theta=1$
67.(C) \($$
\begin{array}{ccc}\begin{array}{c}\mathrm{M}: \mathrm{W} \\
5: 2 \\
300 l\end{array}
$$ \& \begin{array}{c}\mathrm{M}: \mathrm{W} <br>

4: 1\end{array} \&\)| $\mathrm{M}: \mathrm{W}$ |
| :---: |
| $4: 1$ |
| $200 l$ | <br>

$\begin{array}{ll}100 l\end{array}\end{array}$
$1^{\text {st }} 300 \times \frac{1}{3}=100 \rightarrow$ water $=\frac{2}{7} \times 100=\frac{200}{7}$
$2^{\text {nd }} 200 \times \frac{1}{2}=100 \rightarrow$ water $=\frac{1}{5} \times 100=20$
$3^{\text {rd }} 100 \times \frac{1}{7}=\frac{100}{7} \rightarrow$ water $\frac{1}{5} \times \frac{100}{7}=\frac{100}{35}=\frac{20}{7}$
Total water $=\frac{200}{7}+\frac{20}{7}+20=\frac{360}{7}$
Total mixture $=100+100+\frac{100}{7}=\frac{1500}{7}$
Required percentage $=\frac{\frac{360}{7}}{\frac{1500}{7}} \times 100$

$$
=24 \%
$$

68. (D) $\frac{\mathrm{M}_{1} \mathrm{D}_{1} \mathrm{~T}_{1}}{\mathrm{~W}_{1}}=\frac{\mathrm{M}_{2} \mathrm{D}_{2} \mathrm{~T}_{2}}{\mathrm{~W}_{2}}$
$\frac{12 \times 6 \times 240}{460}=\frac{18 \times 360 \times 8}{\mathrm{~W}_{2}}$
$\mathrm{W}_{2}=1380$
69. (A)

$$
\left.(0.87)^{2}+(0.13)^{2}+(0.87) \times(0.26)\right]^{2013}
$$

$$
\left[(0.87)^{2}+(0.13)^{2}+2(0.87) \times(0.13)\right]^{2013}
$$

$$
\left[(0.87+0.13)^{2}\right]^{2013}
$$

$$
\left[1^{2}\right]^{2013}=[1]
$$

$$
=1
$$

70. (C) $2315.25=2000\left(1+\frac{r}{100}\right)^{3}$

$$
\frac{2315.25}{2000} \times \frac{4}{4}=\left(1+\frac{r}{100}\right)^{3}
$$

$$
\frac{9261}{8000}=\left(1+\frac{r}{100}\right)^{3}
$$

$$
\left(\frac{21}{20}\right)^{3}=\left(1+\frac{r}{100}\right)^{3}
$$

$$
\frac{21}{20}=1+\frac{r}{100}
$$

$$
\frac{r}{100}=\frac{21-20}{20}=\frac{1}{20}
$$

$r=5 \%$ half yeraly
or $10 \%$ per annum.
71. (D) Weight of $\mathrm{A}+\mathrm{B}+\mathrm{C}=84 \times 3=252 \mathrm{~kg}$

Weitht of A + B + C + D $=80 \times 4=320 \mathrm{~kg}$ $\mathrm{D}=320-252=68 \mathrm{~kg}$
Weight of $\mathrm{E}=68+3=71 \mathrm{~kg}$
Now we have,

$$
\begin{aligned}
& \frac{\mathrm{B}+\mathrm{C}+\mathrm{D}+\mathrm{E}}{4}=79 \\
\Rightarrow & \mathrm{~B}+\mathrm{C}+\mathrm{D}+\mathrm{E}=79 \times 4=316 \mathrm{~kg} \\
\Rightarrow & \mathrm{~B}+\mathrm{C}=316-139=177 \mathrm{~kg}
\end{aligned}
$$

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$$
\begin{aligned}
\Rightarrow \mathrm{A} & =252-(\mathrm{B}+\mathrm{C})=252-177 \\
& =75 \mathrm{~kg}
\end{aligned}
$$

72. (B) $x=\frac{1}{2+\sqrt{3}}=\frac{1 \times(2-\sqrt{3})}{(2+\sqrt{3})(2-\sqrt{3})}$

$$
\Rightarrow \frac{2-\sqrt{3}}{4-3}=2-\sqrt{3}
$$

$$
\Rightarrow y=\frac{1}{2-\sqrt{3}}=2+\sqrt{3}
$$

$$
8 x y\left(x^{2}+y^{2}\right)
$$

$$
=8 \times(2-\sqrt{3})(2+\sqrt{3})\left[(2-\sqrt{3})^{2}+(2+\sqrt{3})^{2}\right]
$$

$$
=8 \times(4-3)[2 \times(4+3)]
$$

$$
=8 \times 14
$$

$$
=112
$$

73. (A)


$$
\mathrm{AC}=\sqrt{5^{2}-3^{2}}=\sqrt{16}=4 \mathrm{~cm}
$$

length of tangent $=A B=2 \times 4=8 \mathrm{~cm}$
74. (A)

$a=8 \mathrm{~m}$

$$
r=\frac{a}{2 \sqrt{3}}=\frac{8}{2 \sqrt{3}}=\frac{4}{\sqrt{3}}
$$

Area of shaded part $=\frac{\sqrt{3}}{4} \times 8 \times 8-\pi \times\left(\frac{4}{\sqrt{3}}\right)^{2}$

$$
\begin{aligned}
& =16 \sqrt{3}-\frac{22}{7} \times \frac{16}{3} \\
& =16 \sqrt{3}-\frac{352}{21} \\
& =27.68-16.76 \\
& =11 \mathrm{~m}^{2} \text { (Approx.) }
\end{aligned}
$$

75. (C) $\frac{a}{1}=\frac{\sqrt{x+2}+\sqrt{x-2}}{\sqrt{x+2}-\sqrt{x-2}}$
[By componendo devidendo]

$$
\Rightarrow \frac{a+1}{a-1}=\frac{2 \sqrt{x+2}}{2 \sqrt{x-2}}=\frac{\sqrt{x+2}}{\sqrt{x-2}}
$$

$$
\begin{aligned}
& \Rightarrow\left(\frac{a+1}{a-1}\right)^{2}=\left(\frac{\sqrt{x+2}}{\sqrt{x-2}}\right)^{2}=\frac{x+2}{x-2} \\
& \Rightarrow \frac{a^{2}+1+2 a}{a^{2}+1-2 a}=\frac{x+2}{x-2} \\
& \Rightarrow \frac{a^{2}+1}{2 a}=\frac{x}{2} \quad \quad \quad \text { by C \& D ] } \\
& \Rightarrow 2 a^{2}+2=2 a x \\
& \Rightarrow 2 a^{2}-2 a x=-2 \\
& \Rightarrow a^{2}-a x=-2 / 2 \\
& \quad=-1
\end{aligned}
$$

76. (A)


$$
\mathrm{OA}=\mathrm{DB}=\mathrm{AB}
$$

$$
\angle \mathrm{AOB}=60^{\circ}
$$

$\Rightarrow \angle \mathrm{ADB}=\frac{60}{2}=30^{\circ}$
$\because \mathrm{AEBD}$ is a cylic quadrilateral, and $\angle \mathrm{AEB}=180^{\circ}-30^{\circ}=150^{\circ}$
77. (B)


$$
\text { Common tangent } \begin{aligned}
\mathrm{CD} & =\frac{2 \times r_{1} r_{2}}{\sqrt{r_{1} \times r_{2}}} \\
& =\frac{2 \times 8 \times 4}{\sqrt{8 \times 4}} \\
& =8 \sqrt{2} \mathrm{~cm}
\end{aligned}
$$

78. (C)
$2300-32=2268$
$3500-56=3444$
HCF of $2268 \& 3444$ is 84
79. (C) $\sec x+\cos x=2\left[\frac{1}{\cos x}+\cos x=2\right]$

Let $\cos x=1=\sec x$
$\sec ^{16} x+\cos ^{16} x$
$1^{16}+1^{16}=2$
80.(B) Ratio of speed $=3: 5$

Ratio of time 5:3
$P$ will run $=500-200=300 \mathrm{~m}$,
$t=\frac{300}{3}=100 \mathrm{Sec}$

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$Q$ will run $=500 \mathrm{~m}$,
$t=\frac{500}{5}=100 \mathrm{Sec}$
So, Both reach at the same time
81. (A) $\mathrm{A}=\mathrm{P}\left(1+\frac{r}{100}\right)$

$$
\begin{aligned}
\Rightarrow & 68921=64000\left(1+\frac{5}{2 \times 100}\right)^{t} \\
\Rightarrow & \frac{68921}{64000}=\left(1+\frac{5}{200}\right)^{t} \\
\Rightarrow & \left(\frac{41}{40}\right)^{3}=\left(1+\frac{5}{200}\right)^{t}=\left(\frac{41}{40}\right)^{t} \\
& t=3 \text { years }
\end{aligned}
$$

82. (C) Required Area $=\frac{\theta}{360^{\circ}} \pi r_{1}{ }^{2}-\frac{\theta}{360^{\circ}} \pi r_{2}{ }^{2}$

$$
\begin{aligned}
& =\frac{45^{\circ}}{360^{\circ}} \pi \times 4^{2}-\frac{45^{\circ}}{360^{\circ}} \pi \times 3^{2} \\
& =\frac{45^{\circ}}{360^{\circ}} \times \pi(16-9) \\
& =\frac{45^{\circ}}{360^{\circ}} \times \frac{22}{7} \times 7 \\
& =\frac{11}{4} \mathrm{~m}^{2}
\end{aligned}
$$

83. (A)

$$
\begin{aligned}
& \frac{1}{(\sqrt{2}+\sqrt{3})-\sqrt{5}}+\frac{1}{(\sqrt{2}-\sqrt{3})-\sqrt{5}} \\
\Rightarrow & \frac{\sqrt{2}+\sqrt{3}+\sqrt{5}}{(\sqrt{2}+\sqrt{3})^{2}-(\sqrt{5})^{2}}+\frac{\sqrt{2}-\sqrt{3}+\sqrt{5}}{(\sqrt{2}-\sqrt{3})^{2}-(\sqrt{5})^{2}} \\
\Rightarrow & \frac{\sqrt{2}+\sqrt{3}+\sqrt{5}}{2+3+2 \sqrt{6}-5}+\frac{\sqrt{2}-\sqrt{3}+\sqrt{5}}{2+3-2 \sqrt{6}-5} \\
\Rightarrow & \frac{\sqrt{2}+\sqrt{3}+\sqrt{5}}{2 \sqrt{6}}+\frac{\sqrt{2}-\sqrt{3}+\sqrt{5}}{-2 \sqrt{6}} \\
\Rightarrow & \frac{\sqrt{2}+\sqrt{3}+\sqrt{5}-\sqrt{2}+\sqrt{3}-\sqrt{5}}{2 \sqrt{6}} \\
\Rightarrow & \frac{2 \sqrt{3}}{2 \sqrt{6}}=\frac{\sqrt{3}}{\sqrt{6}} \\
= & \frac{1}{\sqrt{2}}
\end{aligned}
$$

84. (B)

$\angle B A C=90^{\circ}$
$\Rightarrow \sin 30^{\circ}=\frac{\mathrm{AC}}{100}$
$\Rightarrow \quad \frac{1}{2}=\frac{\mathrm{AC}}{100} ; \mathrm{AC}=50 \mathrm{~m}$,
$\Rightarrow \sin 60^{\circ}=\frac{\mathrm{AP}}{\mathrm{AC}}$
$\Rightarrow \frac{\sqrt{3}}{2}=\frac{\mathrm{AP}}{50}$
$\mathrm{AP}=25 \sqrt{3} \mathrm{~m}$
85. (B)

| 5 | E | 9 |
| :---: | :---: | :---: |
| 2 | F | 8 |
| 3 | G | 7 |
| 1 | 1 | 1 |

1114
If $F$ is maximum then $E \& G$ are minimum or $\mathrm{E}+\mathrm{G}=0$
Then $0+F+0+2=1$
Then $F$ will be 9
86. (C)


$$
\begin{aligned}
\tan \theta & =\frac{2 \sqrt{3}}{\sqrt{3}}=\sqrt{3} \\
\tan \theta & =\tan 60^{\circ} \\
\theta & =60^{\circ}
\end{aligned}
$$

87. (C)
$\left(2-\frac{1}{3}\right)\left(2-\frac{3}{5}\right)\left(2-\frac{5}{7}\right)\left(2-\frac{997}{999}\right)$
$\frac{5}{3} \times \frac{7}{5} \times \frac{9}{7} \cdots-\cdots \frac{2 \times 999-997}{999}$
$\frac{2 \times 999-997}{3}=\frac{1998-997}{3}$
$=\frac{1001}{3}$
88. (C) $\left[\frac{11}{2} \times \text { min hand }-30 \times \text { hour hand }\right]^{o}$

$$
\begin{aligned}
& {\left[\frac{11}{2} \times 20-30 \times 3\right]^{o}} \\
& {\left[\frac{220}{2}-90\right]^{o}}
\end{aligned}
$$

$$
[110-90]^{\circ}=20^{\circ}
$$

89. (A) Increased area $=100 \% \times \frac{106}{100} \times \frac{106}{100}-100 \%$

$$
=12.36 \%
$$

90. (C)

$\angle \mathrm{ABC}=120^{\circ}$
$\therefore \angle \mathrm{ADC}=60^{\circ}(\because \angle \mathrm{ABC} \& \angle \mathrm{ADC}$ are opp. angles of a cyclic quad.)
$\therefore \angle \mathrm{AOC}=2 \angle \mathrm{ADC}$ (Central angle is twice of the inscribed angle)

$$
\begin{aligned}
& =2 \times 60 \\
& =120^{\circ}
\end{aligned}
$$

In $\square$ AOCP.
$\angle \mathrm{AOC}+\angle \mathrm{APC}=180^{\circ}(\because \angle \mathrm{PAO} \& \angle \mathrm{PCO}$ are $90^{\circ}$ each)
$120^{\circ}+\angle \mathrm{APC}=180^{\circ}$
$\angle \mathrm{APC}=60^{\circ}$
91.(B) Total marks $=3 \times 100=300$

Total marks obtain $=60+80=140$
$70 \%$ of total marks $=300 \times \frac{70}{100}=210$
So, he should obtain marks in 3rd paper
$=210-140=70$
92. (A)


Area of required part
$=35^{2}-\frac{22}{7} \times \frac{35}{2} \times \frac{35}{2}$
= 1225 - 962.5
$=262.5 \mathrm{~cm}^{2}$
93. (C) $\frac{4}{15} \times \frac{5}{8} \times 6+15-10$

$$
\Rightarrow 1+15-10=6
$$

94. (A)


A B
LCM of $25 \& 30=150$
A does 6 unit in a day and $B$ does 5 unit in a day.
$A+B$ does $(6+5) \times 5=55$ unit work
Work completed $=\frac{55}{150}=\frac{11}{30}$
Work left $=1-\frac{11}{30}=\frac{19}{30}$
95. (D) Let the number of Boys $=300 \&$ Girls $=200$

Number of students that appeared in the
exam $=300 \times \frac{30}{100}+200 \times \frac{70}{100}$
$=90+140=230$
Number of students that did not appear in the exam $=500-230=270$
Ratio $=230: 270=23: 27$
96. (B) Let CP of car = $100 \%$

$$
\begin{aligned}
& (90 \%+5000) \times \frac{120}{100}=100000 \\
& 108 \%+6000=100000 \\
& 108 \%=94000 \\
& \begin{aligned}
100 \% & =\frac{94000}{108} \times 100 \\
\quad & =₹ 87000
\end{aligned}
\end{aligned}
$$

97. (C) Let CP of Radio $=100 \%$
$120 \%+60=130 \%$
$60=10 \%$
$100 \%=600$
98. (B) Difference $=₹ 40$
$40=\frac{3200 \times R \times 5}{2 \times 100}-\frac{3000 \times R \times 5}{2 \times 100}$
$40=\frac{100 \times \mathrm{R} \times 5}{200}[32-30]$
$\frac{40 \times 200}{500}=R \times 2$
$R=8 \%$
99. (A) Original After depreciation

| 10 | 9 |
| :---: | :---: |
| 10 | 9 |
| 10 | 9 |
| $\times 10 \coprod_{10,000}$ | 729 |
|  |  |
| $\times 10$ |  |
| 1000 |  |

100. (D) Let marked price $=₹ 900$
then $\mathrm{CP}=₹ 500$
$\mathrm{SP}=500 \times \frac{120}{100}=600$
Discount $\%=\frac{300}{900} \times 100$

$$
=\frac{100}{3}=33 \frac{1}{3} \%
$$



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101. (A)Under Article 360, the President of India can proclaim Financial Emergency if he is satisfied that the financial stability or the credit of India or of any part of its territory is threatened. It remains in force for the period of two months and can continue to stay beyond two months. The proclamation has to be approved by both the Houses of Parliament. The National Emergency and Financial Emergency have no time limit. They can continue to be extended without any limit. But StateEmergency has a time-limit. It cannot go beyond three years. Till now Financial Emergency has never been declared by the President of India.
102. (D)The Drafting Committee for framing the constitution was appointed on 29 August 1947. The committee comprised of a chairman and six other members. In addition a constitutional advisor was also appointed. The committee members wereDr. B. R. Ambedkar- Chairman, K.M. Munshi, Alladi Krishnaswamy Iyer, N Gopalaswami Ayengar, B.L. Mitter, Md. Saadullah and D.P Khaitan.
103. (C)Vinegar is a solution of water and Acetic Acid. It is produced from different fruits that contain sugar through the process of fermentation. There are different types of Vinegar like wine, cider, apples and rice Vinegar.
104. (D)Acid rain is caused by a chemical reaction that begins when compounds like Sulphur dioxide and nitrogen oxides are released into the air. These substances rise into the atmosphere, where they mix and react with water, Oxygen and other chemicals to form more acidic pollutants.
105. (C)Chittagong Armoury raid was done on $18^{\text {th }}$ April 1930 to raid the armoury of Police and auxiliary forces from the Chittagong armoury in Bengal province of British. This raid was led by Surya Sen also known as Master-da. Chittagong is now in Bangladesh.
109. (B)First Administrative Reform Commission was established on $5^{\text {th }}$ January 1996 and chaired by Morarji Desai and later by K. Hanumanthaiah. The ARC recommended the establishment of the Institutions of Lokpal and Lokayukta. It has jurisdiction over all Members of Parliament and Central Government employees in cases of corruption. It was formed in 2013. Movement was led by Anna Hazare and has
counterpart in all the states of India called Lokayuktas.
110. (A)Jacobson's organ is also known as Vomeronasal organ. It is an organ of chemoreception i.e the part of the olfactory system of amphibians, reptiles and mammals but it does not occur in all tetrapod groups. Jacobson's organ ducts connect the organ directly to the nasal cavity in lizards and snakes and helps them in smelling and in communication.
111. (B)Consequences of inflationary price rise are Income redistribution, falling real income, Negative real interest rates, cost of borrowing, Risk of wage inflation, Business competitiveness and Business uncertainity. So Answer will be Increase in economic in equalities.
113. (C)Metalloid is a chemical element with properties in between or a mixture of those of metals and non-metals. Six recognized metalloids are Boron, Silicon, Germanium, Arsenic, Antimony and Tellurium.
116. (D)Laterite soils are aluminous rock, formed by the decomposition because they are found in black soil region with heavy rainfall. This soil is found in the Eastern Ghat of Orissa, the Southern parts of Western Ghat, Malabar Coastal plains and Ratnagiri of Maharashtra, and also some parts of Andhra Pradesh, Tamil Nadu, Karnataka, Meghalaya and Western part of West Bengal.
117. (D)Cloudburst is a sudden downpour within a radius of few kilometres. It does not last longer but is capable of flooding the area.
118. (A)Three language formula is a formula of language learning formulated by the Union Education Ministry of the Government of India in consultation with the states. This formula was formulated in response to demands from non-Hindi speaking states such as Karnataka, Andhra Pradesh and Tamil Nadu.
Kothari Commission was set up in 1964 under the chairmanship of Dr. D.S. Kothari and this commission proposed three language formula.
119. (B)Analogous structures are superficially similar but anatomically dissimilar doing similar functions i.e animals belonging to different groups live in the same habitat like wings of birds and insects are examples of Analogous structure.
121. (A)The national income of a country can be measured by three alternative methods (i) Product Method (ii) Income Method and (iii) Expenditure Method.


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122. (C)Seaweeds contain Iodine compound and obtain Iodine by extracting iodide ions from the seawater.
123. (B)The Ryotwari system is the system to collect revenues from the cultivators of agricultural land. The land revenue was imposed directly on the ryots (are the individual cultivators who actually worked on the land). In Bombay, Madras, Assam and Burma the Zamindars usually did not have a position as a middleman between the government and the farmer. It was introduced by Sir Thomas Munro, appointed as Governor of Madras in May 1820.
125.(B)Water Gas is a synthesis gas containing Carbon monoxide and Hydrogen $\left[\mathrm{CO}+\mathrm{H}_{2}\right]$.
127.(A) The PURA Scheme was advocated by A.P.J Kalam former President of India. In this scheme urban amenities are provided in rural areas. PURA is set to get a push, with pilot schemes planned under the publicprivate partnership mode. This social inclusion programme aims at providing amenities like drinking water, street lights, education, health care and telecom services to the country's rural areas and ensure that 626,000 villages become the part of development process.
128. (D)Regressive tax is a tax that takes a larger percentage from low income people than from high-income people.This tax is applied uniformly i.e. it hits lower income individuals.
133. (C)A convex mirror is also known as diverging mirror. It is a curved mirror in which the reflective surface bulges towards the light source i.e. it reflect light outwards. Such mirrors always forms a virtual image. In vehicles convex mirror is used because it helps the driver to view objects as they appear closer.
134. (C)Carotene are unsaturated hydrocarbon substances which are synthesized by plants and are photosynthetic pigments that helps in photosynthesis. Carotenes are responsible for the orange colour of the carrot.
138. (D)RAM is Random Access Memory-It is a type of computer memory that can be accessed randomly i.e any byte of memory can be accessed without touching the preceding bytes. It is the most common type of memory found in computers and other devices like printers. There are 2 types of RAM - DRAM (Dynamic RAM) and SRAM (Static RAM)
140. (D)Malawath Purna on $25^{\text {th }}$ May 2015 scaled the highest peak of Mount Everest at 13 years and 11 month of age. She became the youngest girl to have reached the summit of Mt. Everest. She was born in Pakala village, Nizamabad district of Telangana State of India.
145. (D)Insectivorous plants generally grow in Nitrogen deficient soils, So to obtain Nitrogen they are attracted towards insects. E.g Venus fly traps.
148. (A)Constant returns to scale is an attribute of a production function which exhibits of changing all inputs by a positive proportional factor and has an effect of increasing the outputs of that factor. This is true when production function has constant returns over that range. OR we can say that when the output of the process increases or decreases simultameously or in step wise with an increase or decrease in the inputs.

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## MEANINGS IN ALPHABETICAL ORDER

## Word

Abrupt
Clammy
Collaborate

Conformity
Cozy
Exorbitant
Filthy
Immaculate
Invasion
Itinerary

Maiden
Manuscripts
Mercenary
Momentary
Momentous
Obscure
Opulent
Perpetual
Precint
Prudential
Raconteur
Recapitulation
Redundant
Revert
Samaritan
Sanguine
Speculate
Stoic

Subordinate
Sweltering
Transcend

Meaning in English
very sudden and not expected unpleasantly wet and cold to work with another person or group in order to achieve or do something

Correspondence in form, Manner or character, Agreement अनु प लन
small, comfortable and warm
too high, expensive
very dirty
having no flow or error the act of invading
A planned route or journey, travel diary
a young girl or woman who is not married written by hand or typed one that serves merely for wages lasting a very short time very important difficult to understand very wealthy everlasting the region immediately surrounding a place having or showing careful good judgment someone who is good at telling stories a concise summary exceeding what is necessary or normal to come or go back a person who is generous in helping those in distress confident and hopeful to think about something and make guesses about it a person who accepts what happens without complaining or showing emotion in a position of less power or authority than someone else अधिस त, दा' यम very hot

तफ्ता हु आ
to rise above or go beyond the normal limits of

## Meaning in Hindi

एक एक
चिर्पच
स्सय' ग क्रना

आ रा मदे ह
बहु तज्य दा, की मती
मै ला, बहु तही खा ब
亏ा, टि ही न
आ क्रमप, चढ़ T ई
${ }^{q} L$ मप का रिय' ${ }^{\prime}$ के लिएप
प्रदक्ष क
पु स तक
अविवा हितयु वती
हस तलिपि
किरा ये का टट, ट。
क्ष पि क
महर वपू प"
अ यम त, अस पट
की मती, सृ द्ध
लगा ता र, अन₹ त
प्र से मा एँ
चा तु र्य पू प` / सझदा री

स र
अना वश्क्ष, अतिरिक त
वा प्सकरना (स पर्क इट यद
मु से बतमे मदद करने वा ल
विश्वा सूम प‘, आ पर वा दी
अं दा जा लगा ना
$\Psi_{i} \boldsymbol{T}$ वही न

चढा ना

## SSC MOCK TEST -5 (ANSWER KEY)

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

181. (A); 'Both ...... and' is a correlative. Change 'as well as' into 'and'.
182. (*); Media can be used as both singular and plural. As a collection of all types of media such as social, mass etc, it can be used as a singular noun but grammar demands it to be used as the plural of 'Medium'.
183. (C); Remove 'not'. 'Not' does not follow 'Unless'.
184. (C); No error
185. (C); No error
186. (D); 'Return' with 'back' makes the sentence superfluous.
187. (B); Here we need an adverb to express how the action was done. Hence 'carefully' is the most appropriate option.
188. (D); 'Take care of' means 'to look

189. (C); 'Insist' is followed by 'on'/'upon'.

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

