## SSC MOCK TEST - 80 (SOLUTION)

1. (B) $123 \Rightarrow(13)^{2}=169$

$$
126 \Rightarrow(16)^{2}=\mathbf{2 5 6}
$$

2. (D) First is the capital of second.
3. (B)

4. 

(C) $22 \Rightarrow 22^{2}+\frac{22}{2}=484+11=495$

$$
24 \Rightarrow 24^{2}+\frac{24}{2}=576+12=\mathbf{5 8 8}
$$

5. (B) Except EYE, the other words have two different vowels.
6. (D) Except Cylinder, other are 2-D geometrical figure.
7. (A) Only for 64, both square root and cube root is possible.
8. (C) Except Kurushetra, other cities are in Punjab.
9. (D) The woman is the mother of Shashank's grand daughter. Hence, the woman is the daughter-in-law of Shashank.
10. (A)


If he starts walking in the morning then finally he will face South and if he starts in the evening then finally he will face North.
11. (C) Since B and D are twins, so B = D.

Now, $\mathrm{A}=\mathrm{B}+3$ and $\mathrm{A}=\mathrm{C}-3$.
Thus, $\mathrm{B}+3=\mathrm{C}-3 \Rightarrow \mathrm{D}+3=\mathrm{C}-3$
$\Rightarrow \mathrm{C}-\mathrm{D}=6$.
12. (C)
13. (B) As the numbers $2,3,4$ and 5 are adjacent to 6 . Hence the number on the face opposite to 6 is 1 .
14. (C)

15. (C)

16. (C) $2 \rightarrow 4 \rightarrow 1 \rightarrow 5 \rightarrow 3$
17. (B) According to the statement, sea transport is cheaper than road transport in the case of route from Bombay to Jafra, not in all the cases. So, conclusion I does not follow. The statement stresses on the saving of fuel. So, conclusion II follows.
18. (B) $36 \Rightarrow \sqrt{36}=6 \Rightarrow 6+1=7$

$$
\begin{aligned}
& 25 \Rightarrow \sqrt{25}=5 \Rightarrow 5+1=6 \\
& 64 \Rightarrow \sqrt{64}=8 \Rightarrow 8+1=\mathbf{9}
\end{aligned}
$$

19. (C) $(12 \times 6)-2=70 \Rightarrow \frac{70}{10}=7$
$(18 \times 3)-4=50 \Rightarrow \frac{50}{10}=\mathbf{5}$
$(19 \times 4)-6=70 \Rightarrow \frac{70}{10}=7$
20. (B) $8+7+3=18 \Rightarrow \frac{18}{3}=6$
$9+8+7=24 \Rightarrow \frac{24}{3}=8$
$12+15+12=39 \Rightarrow \frac{39}{3}=13$
$2+3+1=6 \Rightarrow \frac{6}{3}=\mathbf{2}$
21. (D)
22. (C)
23. (B)
24. (C) $324 \oplus 289=324-289=35 \Rightarrow 35^{2}=1225$
$256 \oplus 225=256-225=31 \Rightarrow 31^{2}=961$
$49 \oplus 25=49-25=24 \Rightarrow 24^{2}=576$
$186 \oplus 97=187-97=89 \Rightarrow 89^{2}=7921$
25. (B)

| Front Face | A | F | E |
| :---: | :---: | :---: | :---: |
| Opposite Face | D | C | B |

26. (D) The Union government has launched the "Digi-Dhan Vyapar Yojana" for Merchants and "Lucky Grahak Yojana" for Consumers in New Delhi. The purpose of the schemes is to encourage people to move towards digital transactions through the offer of incentives. Both the schemes will be implemented by National Payments Corporation of India (NPCI). For these schemes, only those transactions that take place through RuPay Cards, Unstructured

2007, OUTRAM LINES, 1ST FLOOR, OPPOSITE MUKHERJEE NAGAR POLICE STATION, DELHI-110009

Supplementary Service Data (USSD), Unified Payment Interface (UPI) and Aadhaar Enabled Payment System (AEPS) are eligible. The schemes has been launched with the first draw by the Minister for Electronics and Information Technology Ravi Shankar Prasad and Finance Minister Arun Jaitley on December $25^{\text {th }}, 2016$.
27. (C) Philosopher's wool is an oxide of zinc with a white powder used as a pigment, cosmetics, glass, inks and zinc ointment.
28. (D) Bacteria, micro algae and fungi are most widely used in industries. Bacteria like Lactobacillus sp . is used in manufacturing of vinegar and alcohol by fermentation process.
Most of algae are used as single cell protein (i.e. Spirulina).

Different drugs like penicillin are manufactured from fungi Penicillium notatum.
29. (A) X-ray, computed tomography (CT) is a medical imaging method employing tomography created by computer processing. This technique is used to generate a three-dimensional image of the inside of an object.
30. (B) The XXI Commonwealth Games will be held in Gold Coast City, Queensland, Australia between $4^{\text {th }}$ to $15^{\text {th }}$ April 2018. The Gold Coast's creative concept in the Ceremony brought to life the three brand pillars of the Gold Coast 2018 Commonwealth Games - 'The Place', 'The Event' and 'The Sport.
NOTE: $22^{\text {nd }}$ Commonwealth Games would be held from $18^{\text {th }}$ to $30^{\text {th }}$ July 2022. The opening ceremony will be held on the birth date of the late South African President and Antiapartheid leader Nelson Mandela.
31. (A) Deficiency of vitamin C causes Scurvy, a disease of gums. Deficiency of vitamin D causes Rickets, a disease of bones and Deficiency of Vitamin A causes night blindness, a disease of eyes.
32. (A) The Archaeological Survey of India established in 1861 is a department of the Government of India attached to the Ministry of Culture. ASI is responsible for archaeological studies and the preservation of archaeological heritage of the country in accordance with the various acts of the Indian Parliament.
33. (A) Antiseptic are antimicrobial substances
that are applied to living tissue/skin to reduce the possibility of infection, sepsis, or putrefaction. Now phenyl being a phenol derivative possesses effective germicidal properties because phenol is germicidal in strong solution. Used in the form of a powder as an antiseptic baby powder, it has a pain killing effect as well. Example: TCP (Trichlorophenol).
35. (D) The Union Minister of Consumer Affairs, Ram Vilas Paswan has recently launched an 'Online Consumer Mediation Centre (OCMC)' in association with the Bengaluru's National Law School of India University (NLSIU) to provide speedy redressal of consumer grievances in New Delhi. Initially, the OCMC deal with only cases related to e-commerce companies and will facilitate online and even physical mediation between consumers and companies. Apart from this, ministry has also launched 'Smart Consumer' mobile App and helpline no. '14404' for consumer related grievances and also launched Microsite based on the theme "Digitally Safe Consumer Campaign" to help consumers for being vigilant and not falling prey to cyber frauds. The basic purpose of the Centre is to encourage consumers and companies to go for pre-litigation and provide them with an option to settle disputes amicably.
36. (A) A solar eclipse occurs as the moon passes in front of the sun, resulting in the earth falling into the shadow of the moon.
37. (C) According to NHRC Act 1993, only a retired CJI can become chairman of NHRC, appointed by President on the recommendation of a committee comprising of PM, Speaker of Lok Sabha, Home Minister, Leader of Opposition of both Houses of Parliament and Deputy Chairman of Rajya Sabha.
39. (D) Housed within the Carbon Finance Unit of the World Bank, the Bio Carbon Fund is a public-private sector initiative mobilizing financing to help for development of projects that conserve carbon in forest and agroecosystems. It was created in 2004.
40. (D) The Good Governance Day (GGD) is observed every year in India to mark the birth anniversary of former Prime Minister Atal Bihari Vajpayee. The day was established to honour Prime Minister Vajpayee by fostering awareness among the Indian people of accountability in

2007, OUTRAM LINES, 1ST FLOOR, OPPOSITE MUKHERJEE NAGAR POLICE STATION, DELHI-110009
government. From December $25^{\text {th }}$, 2016, the Good Governance campaign will be undertaken for 100 days during which Ministers and Members of Parliament (MoP) will travel across the country and attend programmes highlighting the government's key initiatives. The effort of the government is to improve delivery systems, to promote digital transformation and take forward the connectivity revolution in all sectors.
41. (D) Nitroglycerine (NG) also known as nitroglycerine, trinitroglycerin, trinitroglycerine, 1, 2, 3 - trinitroxypropane and glyceryl trinitrate is a heavy, colourless, oily, explosive liquid obtained by nitrating glycerol. Alfred Nobel discovered that mixing nitroglycerin with diatomaceous earth would turn the liquid into a paste, called dynamite. An advantage of dynamite was that it could be cylinder-shaped for insertion into the drilling holes used for mining.
43. (A) Under Article 76, impeachment procedure of the Attorney-General is not provided. He shall hold office during the pleasure of the President. He must not be a member of either House of Parliament.
44. (D) Cotton is generally considered a rainfed crop. It is also grown in areas where assured irrigation is not available. Black soils can retain water which is very useful property for rainfed crops to grow. The texture of the soil is supportive for the growth of cotton. So black soils are more suitable for cotton to grow.
45. (C) Biotech Labs in Senior Secondary Schools (BliSS) is a scheme to encourage students to consider careers in biotechnology. This scheme envisages to establish labs in North-Eastern States viz. Assam, Arunachal Pradesh, Meghalaya, Mizoram, Tripura, Nagaland, Sikkim and Manipur.
46. (B) The Part III of the Constitution of India gives a detailed description on a charter of rights called the fundamental Rights'. These fundamental rights guarantee civil freedom to all the citizens of India to allow them to live in peace and harmony. These are the basic rights that every Indian citizen has the right to enjoy, irrespective of their caste, creed and religion, place of birth, race, color or gender. These fundamental rights include Right to

Equality, Right to Freedom, Right to Freedom of Religion, Cultural and Education Rights, Right against Exploitation, Right to Constitutional Remedies, etc.
48. (B) Frequency modulation: It is a process in which the frequency of the carrier is varied in accordance with the instantaneous value of modulating voltage. In tele-communications and signal processing, frequency modulation (FM) conveys information over a carrier wave by varying its instantaneous frequency. FM is most commonly used for radio and television broadcasting.
50. (B) Keshavan from India has recently won gold at the 2016 Asian Luge Championship in Nagano, Japan. He dominated the event and finished the 2 heat race with a time of 1 minute, 39.962 seconds and top speed of $130.4 \mathrm{~km} / \mathrm{h}$ to clinch the title. Shiva will take part in the 2017 World Championship in Innsbruck, Austria and will compete in the World Cup circuit in the lead up to the qualification process for the 2018 Olympic Winter Games in Korea.
51. (B) $7,24,25$ is a Pythagorean triplet. Therefore, the given triangle is a right angled triangle.In a right-angled triangle, the median to the hypotenuse is half the hypotenuse and is also the circum-radius of the triangle.As the hypotenuse is 25 , the circum radius is $\mathbf{1 2 . 5}$.
52. (A) $1080=2^{3} \times 3^{3} \times 5$. For any perfect square, all the powers of the primes have to be even numbers. So, if the factor is of the form $2^{\mathrm{a}} \times 3^{\mathrm{b}} \times 5^{\mathrm{c}}$.
The values 'a' can take are 0 and $2, b$ can take are 0 and 2 , and c can take the value 0.

Totally there are 4 possibilities. 1, 4, 9, and 36.
53. (C) The servant worked for 9 months instead of 12 months, he should receive $\frac{9}{12}$ of his annual payment
Let the price of 1 shirt be ₹ $x$.
As the servant receive $₹ 120+x$ where $x$ is the price of the shirt.
Now, we have
$\frac{3}{4}(200+x)=120+x \Rightarrow 150+\frac{3 x}{4}=120+x$
$\Rightarrow x=120$
$\therefore$ Price of the shirt $x=₹ 120$.
54. (C) Equation of a circle with center $(a, b)$ and radius ' $r$ ' units is $(x-a)^{2}+(y-b)^{2}=r^{2}$
$\therefore$ The equation of this circle
$\Rightarrow(x-3)^{2}+(y-2)^{2}=6^{2}$
$\Rightarrow x^{2}-6 x+9+y^{2}-4 y+4=36$
$\Rightarrow \boldsymbol{x}^{2}+\boldsymbol{y}^{2}-\mathbf{6 x}-\mathbf{4} \boldsymbol{y}=\mathbf{2 3}$
55. (C) $\because 40 \%=142-22$

$$
\Rightarrow 40 \%=120
$$

$$
\Rightarrow 100 \% \Rightarrow 300
$$

$\therefore$ Total marks $=\mathbf{3 0 0}$
56. (C) Let an exterior angle $\mathrm{A}^{\circ}$.

Then each interior angle will be $120+\mathrm{A}^{\circ}$.
We know that in any regular polygon, the sum of an exterior and interior angle is always $=180^{\circ}$
$\therefore \mathrm{A}+120+\mathrm{A}=180 \Rightarrow \mathrm{~A}=30^{\circ}$
$\therefore$ No. of sides of a polygon $=\frac{360}{30}=\mathbf{1 2}$
57. (A) Mix $1 \quad$ Mix 2

$\therefore$ Required ratio $=1: 2$
58. (A) Assume the total work to be 600 units. (LCM of all the numbers)
Then C's 1 day work $=8$ units.
$\Rightarrow(\mathrm{A}+\mathrm{B}+\mathrm{C})$ 's 1 day work $=40$ units.
$\mathrm{A}, \mathrm{B}, \mathrm{C}$ work together in the first 2 days
$\Rightarrow$ Work done in the first 2 days
$=40 \times 2=80$ units
C alone works during the last 40 days
$\Rightarrow$ Work done in the last 40 days
$=40 \times 8=320$ units
Remaining work $=600-(320+80)$
$=200$ units
This work is done by B and C in 10 days.
$\Rightarrow(B+C)$ 's 1 day work $=20$ units
$\Rightarrow A$ 's 1 day work $=(A+B+C)$ 's 1 day work $(B+C)$ 's 1 day work $=40$ units -20 units $=$ 20 units
$\Rightarrow A$ can do the work of 600 units in $\frac{600}{20}$
$=30$ days.
59. (B)


Let $A B$ be the height of the tower

$$
\begin{equation*}
\tan x=\frac{h}{160} \tag{i}
\end{equation*}
$$

$\tan 2 x=\frac{h}{60}$
We know that $\tan 2 x=\frac{2 \tan x}{1-\tan ^{2} x}$

$$
\begin{aligned}
& \therefore \frac{h}{60}=\frac{2 \times \frac{h}{160}}{1-\left(\frac{h}{160}\right)^{2}} \\
& \Rightarrow \frac{h}{60}=\frac{h \times 160 \times 160}{80\left[(160)^{2}-h^{2}\right]} \\
& \Rightarrow(160)^{2}-h^{2}=2 \times 60 \times 160 \\
& \Rightarrow 25600-h^{2}=19200 \\
& \Rightarrow h^{2}=6400 \\
& \Rightarrow h=80
\end{aligned}
$$

$\therefore$ Required length $=2 \times 80=\mathbf{1 6 0} \mathbf{~ m}$
60.
(C) $\frac{2 x^{2}+5 x+1}{5 x}=3$

$$
\frac{x\left(2 x+5+\frac{1}{x}\right)}{5 x}=3
$$

$$
2 x+5+\frac{1}{x}=15
$$

$$
2 x+\frac{1}{x}=10
$$

$$
\Rightarrow \frac{2 x^{2}+1}{x}=10
$$

$\Rightarrow \frac{2 x^{2}+1}{2 x}=5 \Rightarrow \frac{2 x}{2 x^{2}+1}=\frac{1}{5}=\mathbf{0 . 2}$
61. (D)

$\therefore$ Required ratio
$=1:(3-1)$
$=1: 2$
62. (B) Time taken to meet $=\frac{\text { Distance between them }}{\text { Relative speed }}$
$=\frac{81}{(4+5)}=9 \mathrm{hrs}$
$\therefore$ Distance traveled by women $=9 \times 4$
= $\mathbf{3 6}$ miles .
63. (B)


In $\triangle \mathrm{FOE}$,

$$
\begin{aligned}
& \mathrm{EF}^{2}=\mathrm{OF}^{2}+\mathrm{OE}^{2} \\
& \Rightarrow \mathrm{EF}=\sqrt{5^{2}+12^{2}} \\
& \Rightarrow \mathrm{EF}=13 \mathrm{~cm}
\end{aligned}
$$

T.S.A $=\frac{1}{2} \times$ Perimeter of Base $\times$ Slant
height + Area of base
$=\frac{1}{2}(4 \times 10) \times 13+10 \times 10$
$=260+100=\mathbf{3 6 0} \mathbf{c m}^{\mathbf{2}}$
64. (C) $x+\frac{2}{x}=1$

$$
\begin{align*}
& x^{2}+2=x  \tag{i}\\
& x-x^{2}=2 \tag{ii}
\end{align*}
$$

$\frac{x^{2}+x+2}{x^{2}(1-x)}=\frac{x^{2}+2+x}{x\left(x-x^{2}\right)}$
Putting the value from (i) and (ii)

$$
\frac{x+x}{x \times 2}=\frac{2 x}{2 x}=\mathbf{1}
$$

65. (B) The radius of the wheel measures 21 cm . In one rotation this wheel will cover
$=2 \times \pi \times 21=132 \mathrm{~cm}$.
In an hour, the wheel will cover a distance of $(132 \times 600) \times 60=4752000 \mathrm{~cm}$.
$\therefore$ The speed of the car $=4752000 \mathrm{~cm} / \mathrm{hr}$
$=47.52 \mathrm{~km} / \mathrm{hr}$
66. (C) Put $\theta=45^{\circ}$, then $\sin \theta+\cos \theta=\sin 45^{\circ}+\cos 45^{\circ}$
$=\frac{1}{\sqrt{2}}+\frac{1}{\sqrt{2}}=\sqrt{2}$
Now, $\operatorname{cosec} \theta-\sec \theta=\operatorname{cosec} 45^{\circ}-\sec 45^{\circ}$

$$
=\sqrt{2}-\sqrt{2}=\mathbf{0}
$$

67. (C) The interest earned for the 5 year period between the 3rd year and 8th year
$=400-300=100$
As the simple interest earned for a period of 5 years is 100 , interest earned per year $=20$
$\therefore$ Interest earned for 3 years $=3 \times 20=60$. Hence, initial amount invested $=$ Amount after 3 years - Interest for 3 years
$=300-60=240$
Rate of interest $=\frac{\text { Interest per year }}{\text { Principal invested }} \times 100$
$=\frac{20}{240} \times 100=\mathbf{8 . 3 3} \%$
68. (C) The total time of journey $=5$ hours.

Let $x$ hours be the time that I travelled at $40 \mathrm{~km} / \mathrm{h}$
$\therefore 5-x$ hrs would be time that I travelled at $60 \mathrm{~km} / \mathrm{h}$.
Now, we have
$40 x+(5-x) \times 60=240$, we get
$40 x+300-60 x=240$
$\Rightarrow 20 x=60$ or $x=3 \mathrm{hrs}$
$\therefore$ We can say that the first part of journey last for $\mathbf{3} \mathbf{h r s}$.
69. (D) $\frac{\sec \theta+\tan \theta}{\sec \theta-\tan \theta}=\frac{5}{3}$
$\Rightarrow$ Applying componendo and dividendo

$$
\frac{2 \sec \theta}{2 \tan \theta}=\frac{5+3}{5-3}
$$

$\Rightarrow \frac{1}{\cos \theta \times \frac{\sin \theta}{\cos \theta}}=4 \Rightarrow \frac{1}{\sin \theta}=4 \Rightarrow \sin \theta=\frac{\mathbf{1}}{\mathbf{4}}$
70. (A) Let the label price be $=₹ 100$. The trader buys at a discount of $19 \%$.
Hence, his cost $=100-19=81$.
He wants to make a profit of $20 \%$. Hence his selling price $=1.2(81)=97.2$
However, he wants to get this ₹ 97.2 after providing for a discount of $10 \%$. i.e. he will be selling at $90 \%$ of his marked price.
Hence, his marked price $=108$ which is $\mathbf{8 \%}$ more than the original label price.

## Campus

## K D Campus Pvt. Ltd

2007, OUTRAM LINES, 1ST FLOOR, OPPOSITE MUKHERJEE NAGAR POLICE STATION, DELHI-110009
71. (C) Required length $=$ H.C.F. of 700 cm , 385 cm and $1295 \mathrm{~cm}=\mathbf{3 5} \mathbf{~ c m}$
72. (B) $(0.04)^{-1.5}=\left(\frac{4}{100}\right)^{-1.5}$

$$
\begin{aligned}
& =\left(\frac{1}{25}\right)^{\left(-\frac{3}{2}\right)}=(25)^{\left(\frac{3}{2}\right)}=\left(5^{2}\right)^{\left(\frac{3}{2}\right)} \\
& =(5)^{2 \times\left(\frac{3}{2}\right)}=5^{3}=\mathbf{1 2 5}
\end{aligned}
$$

73. (C) Required average

$$
\begin{aligned}
& =\frac{250+375+200+450+75}{5} \\
& =\frac{1350}{5}=\mathbf{2 7 0}
\end{aligned}
$$

74. (A) $\mathrm{A}+\mathrm{B}=375+250=625$
$D+E=450+75=525$
$\therefore$ Required $\%($ less $)=\frac{(625-525) \times 100}{625}$
$=\frac{100 \times 100}{625}=\mathbf{1 6 \%}$
75. (C) $\mathrm{A}+\mathrm{E}=250+75=325$

$$
\mathrm{D}=450
$$

Required \% $=\frac{450-325}{450} \times 100$
$=\frac{125 \times 2}{9}=\frac{250}{9}=\mathbf{2 7 . 6 6 \%}$

## MEANINGS IN ALPHABETICAL ORDER

## Word

Put up with
Get along with
Pull through
Pull down
Acrimony
Adroit
Cower
Pinnacle
Ridge
Scornful
Apocryphal
Dubious
Canonical

Sapid
Turbid
Arid
Vapid
Circumnavigate
Hose

## Meaning in English

to tolerate
stay happily together
to survive
to destroy
bitterness or ill feeling
skilled, clever
to sit down on ground in proper manner
on the top, peak
a long narrow hill top
feeling or expressing contempt
doubtful on authentication
doubtful, suspected
included in the list of sacred books officially accepted as genuine
having a pleasant taste
unclear
too dry or barren to support vegetation
offering nothing that is challenging
sail all the way around
a flexible tube conveying water

Meaning in Hindi
बदा ${ }^{`}$ प त्रना
मिल- जु लकर स था रहना
जि वित रहना
तबा ह करना, बबा ${ }^{\text { }}$ द करन
कट, ता , रख $T$ प्म
दक्ष , निपु प
प लе T $\uparrow$ मा रकर बै ठना
शि ख र
पर्व तका सं करा उन ${ }^{\circ}$ चा
तिरस का रपू प
प्र का यु व त
संदिग ध सं दे हपू पर र्ध वै ध निक

मेजदा र, स वा दिष्ट
अर पट
बं ज
नी रस बे ज न
जहा जद्वा रा परिभ L मण कनग
पा इ प

## SSC MOCK TEST - 80 (ANSWER KEY)

1. (B)
2. (D
3. (C)
4. (D)
5. (A)
6. (B)
7. (A)
8. (A)
9. (A)
10. (C)
11. (D)
12. (A)
13. (C)
14. (C)
15. (D)
16. (D)
17. (D)
18. (B)
19. (A)
20. (D)
21. (B)
22. (B)
23. (A)
24. (B)
25. (C)
26. (A)
27. (C)
28. (A)
29. (C)
30. (C)
31. (C)
32. (B)
33. (A)
34. (A)
35. (A)
36. (C)
37. (B)
38. (C)
39. (D)
40. (D)
41. (B)
42. (B)
43. (B)
44. (B)
45. (D)
46. (C)
47. (A)
48. (B)
49. (D)
50. (C)
51. (D)
52. (C)
53. (D)
54. (C)
55. (B)
56. (D)
57. (C)
58. (A)
59. (B)
60. (C)
61. (C)
62. (B)
63. (D)
64. (B)
65. (C)
66. (C)
67. (B)
68. (A)
69. (D)
70. (B)
71. (C)
72. (C)
73. (D)
74. (D)
75. (B) The correct usage is 'request you to come'. Remove 'kindly' from part (B). 'Request' and 'kindly' when used together make the sentence superflous.
76. (B) Replace 'dreams' by 'dreamt'. The action is of past.
77. (A) Replace 'who' by 'which'. 'Who can be used for human beings only. Change 'belong' into 'belongs', as 'Sassafras' is singular.

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

