

**SSC MOCK TEST – 105 (SOLUTION)**

1. (A) As, Internal security is an issue of Ministry of Home Affairs. Similarly, **Company** is an issue of Ministry of corporate Affairs.
2. (A) As, the unit of Force is Newton. Similarly, the unit of Sound is **Decibel**.
3. (B) EVENT is written in alphabetical order i.e. EENTV Similarly, REASON is written in alphabetic order i.e **AENORS**
4. (C) As,  $(7 + 3)^2 = 100$   
Similarly,  
 $(1 + 8)^2 = 81$
5. (D) Except **Son**, all are tributaries of Yamuna.
6. (C)  $(13)^2 = 169 \Rightarrow$  reverse the digit = 961  
 $(16)^2 = 256 \Rightarrow$  reverse the digit = 652  
 **$(15)^2 = 225 \Rightarrow$  reverse the digit = 522**  
 $(26)^2 = 676 \Rightarrow$  reverse the digit = 676
7. (C) 

B	I	P
+7	+7	
E	L	S
+7	+7	

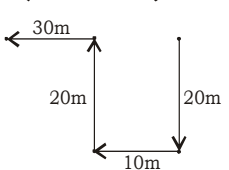
G	N	U
+7	+7	
T	A	G
+7	+6	
8. (B) 

16	64	625	81
↓	↓	↓	↓
$2^4$	$4^3$	$5^4$	$3^4$

 Cause
9. (D)
10. (C)
11. (C) 

1	3	10	41	206
×2+1	×3+1	×4+1	×5+1	
12. (D) 

9	20	44	94	196
×2+2	×2+4	×2+6	×2+8	
13. (C) 

A	Z	K	H	S	R	O	L	Y	V	E	F
			+7			+7			+7		
			-7			-7			-7		
			+7			+7			+7		
14. (C)  $\oplus M \xleftarrow{\text{Brother}} N \ominus \xrightarrow{\text{Brother}} B \oplus$   
 $\uparrow$  Brother  
 $\swarrow$  Sister  
D
15. (C) 
16. (A)  $3 + 1^3 = 4$   
 $5 + 3^3 = 32$   
 $7 + 6^3 = 223$
17. (B)  $(6^2 + 8^2)^{1/2} = 10$   
 $(8^2 + 15^2)^{1/2} = 17$   
 $(20^2 + 21^2)^{1/2} = 29$
18. (B)  $(8)^2 + 36 = 100$   
 $(4)^2 + 20 = 36$   
 **$(6)^2 + 64 = 100$**
19. (A)

20. (B) Bags Papers Pages

I. False  
II. False

21. (B)
22. (A)
23. (A)
24. (A)
25. (C)
26. (B) During sunrise and sunset the distance that the light has to travel from the sun to an observer is greatest. This means a large amount of blue and violet light has been scattered. So the light that is received by an observer is mostly of a longer wavelength and therefore appears to be red.
27. (B) The renowned Ayurveda physician 'Vaidya' Rajesh Kotecha has been appointed as new special secretary in Ministry of Ayush for three years on a contract basis. Kotecha is the chief consultant of Chakrapani Ayurveda Clinic, Jaipur.
28. (C) 52nd Constitutional Amendment Act, 1985 has banned floor crossing by the members elected on a party ticket to the legislation. It provides disqualification of members from Parliament and assembly in case of defection from one party to other.
29. (B) The symbol of the Indian Rupee was designed by the Bombay IIT postgraduate D.Uday Kumar. He has also designed a Tamil font named "Parashakti" as a mini project at the IDC, under the guidance of Prof. G. V. Sreekumar, who is one of the few font experts in the country. During his MDes project he wrote and designed a book on Tamil typography, which is the first attempt at bringing such a subject to a Tamil audience. In this book D.Uday Kumar also created new Tamil terminology for many typographic terms where English words were used.
30. (D) The iconic Taj Mahal Palace hotel of Mumbai has acquired an 'image trademark' under the Trademark Act of

1999. Thus, the Palace has become the first building in India to get intellectual property rights protection for its architectural design. Now, it is will be difficult to use Taj Mahal Palace's images for commercial purposes without paying the company a licensing fee. The Trade Marks Act of 1999 is the current governing law relating to registered trademarks which replaced The Trade and Merchandise Marks Act of 1958.
32. (C) Human Chorionic gonadotropin is a hormone produced in the human placenta that maintains the corpus luteum during pregnancy.
34. (C) A basic microscope is made up of two converging lenses. The first lens creates a real image which serves as the object for the second lens, and the image created by the second lens is the one a viewer sees. The final image is magnified, virtual and inverted compared to the original object.
35. (D) The World Hydrography Day (WHD) is observed every year on June 21 to publicise the work of hydrographers and to create awareness about hydrography which is an essential science before undertaking any activity on or under the sea. The 2017 theme is "Mapping our seas, oceans and waterways - more important than ever".
36. (D) Napoleon -I and Field Marshal Arthur Wellesley never met or corresponded, and they fought only one battle directly against each other, one June 18, 1815. At Waterloo in Belgium, Napoleon Bonaparte suffered defeat at the hands of the Duke of Wellington. The fact that it was the Battle of Waterloo, which resulted in Napoleon's Permanent removal from the French throne, cemented them together in history.
37. (B) According to biological classification, first of all we see that the organism belongs to which kingdom and phylum, class, order, family, genus and then species.
38. (A) The Parliament enacted the "President Act, 1969" (Discharge of Functions) which provides that in the event of occurrence of vacancy in the office of both the President and the Vice-President, the Chief Justice of India or in his absence the senior-most judge of the Supreme Court available shall discharge the functions until a new President is elected.
39. (A) Pyrethrin used in mosquito coil is a natural, powdered material obtained from the seed of a kind of chrysanthemum plant.
42. (C) The liquidity preference theory of interest has been propounded by JM Keynes. According to him, "Interest is the reward for parting with liquidity."
43. (C) The world's first-ever data embassy will be established by the Estonian government in Luxembourg in 2018. For this, Prime Minister of Estonia Juri Ratas and Prime Minister of Luxembourg Xavier Bettel has signed an agreement on housing data and information systems, that will pave the way to open data embassy in Luxembourg. Its establishment is part of the Estonian general strategy of data management and fundamentally a double guarantee to their data and services. In addition, the data embassy will have the same rights as any other physical embassy of Estonia.
44. (C) The Bardoli Satyagraha of 1928, in the state of Gujarat, India during the period of the British Raj, was a major episode of civil disobedience and revolt in the Indian Independence Movement. Sardar Vallabh Bhai Patel played an important role and was the leader in Bardoli Satyagraha.
45. (A) The Bhawal National Park is located at Gazipur in Dhaka Division of Bangladesh. The core area of the park covers 940 hectares but extends to 5,022 hac of surrounding forest. Its purpose is to protect important habitats as well as to provide opportunities for recreation. The park has 345 plant species, including 152 different tree species, 53 shrubs, 106 herbs and 34 climber species.
47. (B) The rate of heart beat of an Elephant is about 25times/minute. This is because bigger animals don't need to pump as much blood as a bird. A birds' heart beats about 100 times a minute. And a human's heart beats about 72 times a minute.
49. (C) Since 1947, the Indian economy has been premised on the concept of planning. This has been carried through the Five-Year Plans, developed, executed, and monitored by the Planning Commission (NITI Aayog after 2014). With the Prime Minister as the ex-officio

Chairman, the commission has a nominated Deputy Chairman, who holds the rank of a Cabinet Minister. Revised versions of the formula have been used since then to determine the allocation of central assistance for state plans. The new government led by Narendra Modi, elected in 2014, and has announced the dissolution of the Planning Commission, and its replacement by a think tank called the NITI Aayog (an acronym for National Institution for Transforming India). National Development Council finally approves the draft of five year plan.

50. (D) The Sixth ruler of Mughal Empire Aurangzeb banned Music and Dancing. Abul Muzaffar Muhi-ud-Din Muhammad Aurangzeb (14 October 1618 – 20 February 1707) generally known as Aurangzeb Alamgir was the third son of Shah Jahan and Mumtaz Mahal. He was a devout Muslim and strictly adhered to Islam. Aurangzeb was not like his ancestors. He made Islamic law as foundation of his reign. He destroyed many Hindu temples and forced many non-Muslim to convert into Islam. Aurangzeb lives a simple and pious life. He never touched alcohol and disliked music. He banned music and dance in his kingdom.

51. (A) ATQ,  
Required Speed =

$$\frac{\text{Difference between the time of shots (in sec)}}{\text{Time of 2nd shot (in minute)}} \times \frac{60}{1000}$$

$$= \frac{320 \times 100}{40} \times \frac{60}{1000} = \mathbf{144 \text{ kmph}}$$

52. (A) ATQ,

A	:	B	:	C
$7 \times 5 + 7 \times \frac{5}{6} \times 5$	:	$9 \times 5 + 9 \times \frac{6}{7} \times 5$	:	$11 \times 5 + 11 \times \frac{9}{8} \times 5$
$7 + \frac{35}{6}$	:	$9 + \frac{54}{7}$	:	$11 + \frac{99}{8}$
$77 \times 28$	:	$117 \times 24$	:	$187 \times 21$
2156	:	2808	:	3927

Hence, B's profit =  $\frac{44455 \times 2808}{8891}$

= ₹14040

53. (D) The difference between two numbers  
= 3244 – 917 = 2327  
= 13 × 179

So, 179 is the three digit number.  
Hence, required sum = 1+7+9=17

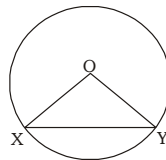
54. (A) ATQ,

$$\frac{15 \times 55 - x}{23 \times 55 + 35} = \frac{8}{13}$$

⇒ x = 25

Hence, the number of students = 25

55. (C) ATQ,



Area of  $\Delta OXY = \frac{1}{2} \times OX \times OY = 128$

⇒  $OX^2 = 256$  [OX = OY]

⇒ OX = 16

Then,

Required Area =  $\pi (16)^2 = \mathbf{256\pi \text{ cm}^2}$

56. (D) ATQ,

$$x \times \frac{1}{4} \times \frac{3}{7} \times \frac{2}{5} = 30$$

⇒ x = 700

Then,

Required number =  $\frac{700 \times 17}{100} = \mathbf{119}$

57. (B) inradius of triangle ( $r_i$ ) =  $\frac{\frac{1}{2} \times 8 \times 6}{12} = 2 \text{ cm}$

and

circumradius of triangle ( $r_c$ ) =  $\frac{8 \times 6 \times 10}{4 \times \frac{1}{2} \times 8 \times 6} = 5 \text{ cm}$

then,

Required distance =  $\sqrt{r_c^2 - 2r_c r_i}$

=  $\sqrt{(5)^2 - 2 \times 5 \times 2} = \mathbf{\sqrt{5} \text{ cm}}$

58. (A) ATQ,

the wage of a man = 2 × the wage of a woman

Then,

$$\Rightarrow \frac{48 \times 45}{2 \times 16767} = \frac{x \times 25}{6210}$$

⇒ x = 16

Hence, the number of women = 16

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59. (D) ATQ,

$$\text{Profit/Loss} = \frac{\left(\frac{8 \times 1000}{50} - 250\right)}{250} \times 100$$

$$= -36\%$$

Hence, Required Loss = **36%**

60. (B) ATQ,

$$x + \frac{1}{x} = 4$$

Then,

$$x^2 + \frac{1}{x^2} = 14 \dots\dots(i) \quad \text{and}$$

$$x^3 + \frac{1}{x^3} = 52 \dots\dots(ii)$$

multiply equation (i) and (ii)

$$\Rightarrow \left(x^2 + \frac{1}{x^2}\right)\left(x^3 + \frac{1}{x^3}\right) = x^5 + \frac{1}{x^5} + x + \frac{1}{x} = 52 \times 14$$

$$\Rightarrow x^5 + \frac{1}{x^5} = 728 - 4 = \mathbf{724}$$

61. (C) ATQ,

$$\frac{\sqrt{10 + \sqrt{25 + \sqrt{100 + \sqrt{400 + 41}}}}}{3}$$

$$= \frac{\sqrt{10 + \sqrt{25 + \sqrt{100 + 21}}}}{3}$$

$$= \frac{\sqrt{10 + \sqrt{25 + 11}}}{3} = \frac{\sqrt{10 + 6}}{3} = \frac{\mathbf{4}}{\mathbf{3}}$$

62. (B) ATQ,

$$\frac{1}{a} + x = a$$

$$1 + ax = a^2$$

$$x = \frac{a^2 - 1}{a}$$

$$\text{Hence, Required number} = \frac{\mathbf{a^2 - 1}}{\mathbf{a}}$$

63. (A) ATQ,

$$\frac{\text{C.S.A}}{\text{T.S.A}} = \frac{x}{2112} = \frac{125}{300}$$

$$\Rightarrow x = 880 \text{ m}^2$$

$$\text{T.S.A} = \text{C.S.A} + 2\pi r^2$$

$$\Rightarrow 2\pi r^2 = 1232$$

$$\Rightarrow r = 14 \text{ m}$$

and

$$h = 10 \text{ m}$$

Then,

$$\text{Required volume} = \frac{22}{7} \times 14 \times 14 \times 10 = \mathbf{6160 \text{ m}^3}$$

$$64. (C) \text{ CP : SP : MP}$$

$$100 : 136 : 170$$

Then,

$$\text{Ratio MP : CP}$$

$$170 : 100$$

$$\Rightarrow 17 : 10$$

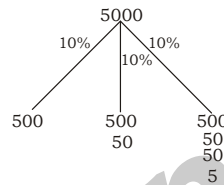
Hence, Required ratio = **17 : 10**

65. (B) ATQ,

$$\text{Required Total time} = \frac{300 \times 250 \times 8}{0.4 \times 0.3 \times 20 \times 1000}$$

$$= \mathbf{250 \text{ hours}}$$

66. (A) ATQ,



$$\text{Then, C.I. : S.I.}$$

$$1655 : 1500$$

$$331 : 300$$

Hence, Required Ratio = **331 : 300**

67. (A) ATQ,

$$x = \frac{1}{\sec A - \tan A} = \sec A + \tan A$$

At  $\theta = 45^\circ$

$$\sec 45^\circ + \tan 45^\circ = \sqrt{2} + 1$$

$$68. (B) \frac{x^2 - yz}{x^2 + yz} + \frac{y^2 - zx}{y^2 + zx} + \frac{z^2 - xy}{z^2 + xy} = 1 \dots\dots(i)$$

$$\Rightarrow \frac{x^2 - 2yz + yz}{x^2 + yz} + \frac{y^2 - 2zx + zx}{y^2 + zx} + \frac{z^2 - 2xy + xy}{z^2 + xy} = 1$$

$$\Rightarrow 1 - \frac{2yx}{x^2 + yz} + 1 - \frac{2zx}{y^2 + zx} + 1 - \frac{2xy}{z^2 + xy} = 1$$

$$\Rightarrow \frac{yz}{x^2 + yz} + \frac{zx}{y^2 + zx} + \frac{xy}{z^2 + xy} = 1$$

Addition in the question (i)

$$\Rightarrow \frac{x^2}{x^2 + yz} + \frac{y^2}{y^2 + zx} + \frac{z^2}{z^2 + xy} = \mathbf{2}$$

69. (D) ATQ,

$$x + \frac{1}{3x} = 6$$

multiply by 3

$$\Rightarrow 3x + \frac{1}{x} = 18$$

Taking cubes on both sides

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$$= 27x^3 + \frac{1}{x^3} = (18)^3 - 3 \times 3x \times \frac{1}{x} \left( 3x + \frac{1}{x} \right)$$

$$= (18)^3 - 9 \times 18$$

$$= 5832 - 162$$

$$= \mathbf{5670}$$

70. (B) ATQ,

$$\text{Side of triangle} = \frac{\sqrt{121\sqrt{3} \times 4}}{\sqrt{3}}$$

$$= 22\text{cm}$$

$$\text{Then, radius of circle} = \frac{3 \times 22}{2 \times \frac{22}{7}} = 10.5\text{cm}$$

$$\text{Hence, Required Area} = \frac{22}{7} \times \frac{105}{10} \times \frac{105}{10}$$

$$= \mathbf{346.5\text{cm}^2}$$

71. (A) Required Profit or Loss =  $+80 - 20 + \frac{(80)(-20)}{100}$

$$= \mathbf{44\%}$$

72. (A) ATQ,

$$\frac{3x + 15}{x + 15} = 2$$

$$\Rightarrow x = 15$$

$$\text{Hence, the required sum} = 3 \times 15 + 1 \times 15$$

$$= \mathbf{60 \text{ years}}$$

**Alternate**

$$\begin{matrix} \text{F} & : & \text{S} \\ 3 & : & 1 \\ +1\text{unit} & & \\ \text{After 15 Years} & 4 & : & 2 \end{matrix} +1\text{unit}$$

Then, 1 unit = 15 years

So, 4 units = 60 years

Hence, Required Sum = **60 years**

73. (D) ATQ,

$$\text{Required Sum} = \frac{24500}{14} \times 20 = \mathbf{₹35000}$$

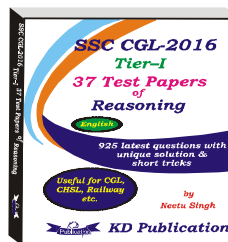
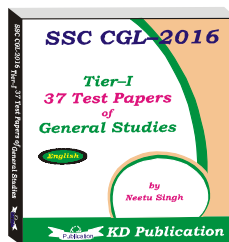
74. (B) Required Angle =  $\frac{360^\circ \times 25}{100} = \mathbf{90^\circ}$

75. (C) Ed. + Oth. + Fu. + Re.: Cl. + Food. + Fu. + Oth.

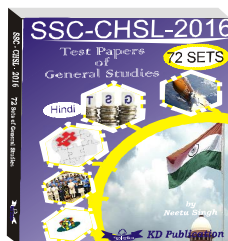
$$\begin{matrix} 15 & + & 6 & + & 9 & + & 14 & : & 11 & + & 45 & + & 9 & + & 6 \\ & & & & & & & & 44 & & & & & & 71 \end{matrix}$$

Hence, Required Ratio = **44 : 71**

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**MEANINGS IN ALPHABETICAL ORDER**

<b>Word</b>	<b>Meaning in English</b>	<b>Meaning in Hindi</b>
<b>Abeyance</b>	a state of temporary suspension	स्थगन
<b>Aesthete</b>	a person who is appreciative of and sensitive to art and beauty	सौन्दर्यवादी
<b>Ancient</b>	very old	प्राचीन
<b>Battered</b>	damaged by hard use	क्षतिग्रस्त
<b>Cautious</b>	careful about avoiding danger	सजग, सचेत
<b>Concatenate</b>	to link together in a series or chain	श्रेणीबद्ध करना
<b>Connoisseur</b>	a person who knows a lot about art	जानकार, विशेषज्ञ, कला का पारखी
<b>Coronation</b>	the act of crowning	तिलकोत्सव
<b>Dabbler</b>	one not deeply engaged in something	शौकीन
<b>Dilettante</b>	a person whose interest in an art or in an area of knowledge is not very deep	नौसिखिया
<b>Epigram</b>	a terse, sage, or witty and often paradoxical saying	विदग्धोक्ति, सूक्ति
<b>Erroneous</b>	not correct	गलत
<b>Felicitation</b>	an expression of good wishes	बधाई
<b>Feud</b>	a mutual enmity or quarrel that is often prolonged	पुश्तैनी झगड़ा
<b>Maestro</b>	a master usually in an art	आचार्य, उस्ताद
<b>Medieval</b>	of or relating to the Middle Ages	मध्यकालीन
<b>Permanence</b>	the quality of lasting forever	अपरिमेयता, अनश्वर होना
<b>Platitude</b>	a banal, trite, or stale remark	घिसी-पिटी कहावत
<b>Prone</b>	susceptible, vulnerable	संवेदनशील
<b>Redemption</b>	the act of saving people from sin and evil	मुक्ति
<b>Rhetoric</b>	the art of speaking effectively	वाक्पटुता
<b>Siege</b>	a military blockade of a city or fortified place to compel it to surrender	घेराबन्दी
<b>Smug</b>	self-satisfied	आत्मसंतुष्ट



**SSC MOCK TEST - 105 (ANSWER KEY)**

- |         |         |         |          |
|---------|---------|---------|----------|
| 1. (A)  | 26. (B) | 51. (A) | 76. (B)  |
| 2. (A)  | 27. (B) | 52. (A) | 77. (B)  |
| 3. (B)  | 28. (C) | 53. (D) | 78. (B)  |
| 4. (C)  | 29. (B) | 54. (A) | 79. (C)  |
| 5. (D)  | 30. (D) | 55. (C) | 80. (A)  |
| 6. (C)  | 31. (C) | 56. (D) | 81. (B)  |
| 7. (C)  | 32. (C) | 57. (B) | 82. (A)  |
| 8. (B)  | 33. (C) | 58. (A) | 83. (B)  |
| 9. (D)  | 34. (C) | 59. (D) | 84. (A)  |
| 10. (C) | 35. (D) | 60. (B) | 85. (A)  |
| 11. (C) | 36. (D) | 61. (C) | 86. (C)  |
| 12. (D) | 37. (B) | 62. (B) | 87. (C)  |
| 13. (C) | 38. (A) | 63. (A) | 88. (D)  |
| 14. (C) | 39. (A) | 64. (C) | 89. (D)  |
| 15. (C) | 40. (C) | 65. (B) | 90. (A)  |
| 16. (A) | 41. (C) | 66. (A) | 91. (A)  |
| 17. (B) | 42. (C) | 67. (A) | 92. (C)  |
| 18. (B) | 43. (C) | 68. (B) | 93. (A)  |
| 19. (A) | 44. (C) | 69. (D) | 94. (A)  |
| 20. (B) | 45. (A) | 70. (B) | 95. (C)  |
| 21. (B) | 46. (A) | 71. (A) | 96. (B)  |
| 22. (A) | 47. (B) | 72. (A) | 97. (B)  |
| 23. (A) | 48. (B) | 73. (D) | 98. (B)  |
| 24. (A) | 49. (C) | 74. (B) | 99. (B)  |
| 25. (C) | 50. (D) | 75. (C) | 100. (D) |

76. (B) Replace 'credible' with 'credulous'.

'Credible' means 'able to be believed' (विश्वसनीय)

'Credulous' means 'gullible, naive'(भोला भाला)

77. (B) 'Dreamt' takes fix preposition 'of' with 'it' and also after preposition V+ing form is used.Hence replace 'to own' with 'of owning'.

78. (B) Add 'from' after 'different'.

If two adjectives/verbs etc. take two different prepositions, we must mention both the prepositions, we cannot simply use one preposition with the last adjective/verb.

79. (C) Here 'respectably' is an adverb which will be used to qualify an adjective (connected).

'Respectively' means 'in particular'.(क्रमशः)

'Respective' means 'belonging to each of two people or more things'.(संबंधित)

'Respectably'(adverb) means 'in a respectable way'.(आदरणीय तरीके से)

'Respectable' means 'worthy of respect'.(आदरणीय)

80. (A) 'Hand something in' is a phrasal verb which means 'to give your finished work to a teacher'.

88. (D) Adverb of manner is generally used at the end of the sentence.

89. (D) After **can't help but** V1 is used.  
'(Someone) can't help but (do something)' is a phrase which means 'to talk about something that you can't control'.

90. (A) V2 of 'strike' is 'struck'. See chapter Verb of Volume-1.

91. (A) Replace 'on' with 'to'.

92. (C) 'Concatenate' means 'link(things) together in chain'.

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

**Note:- Whatsapp with Mock Test No. and Question No. at 7053606571 for any of the doubts. Join the group and you may also share your suggestions and experience of Sunday Mock Test.**

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