

SSC MOCK TEST – 104 (SOLUTION)

1. (B) As, the headquarters of World Bank is in Washington. Similarly, the headquarters of International Monetary Fund is in **Washington**.

2. (D) As, $26 \rightarrow 5^2+1$, $65 \rightarrow (5+3)^2+1$

Similarly, $170 \rightarrow 13^2+1$, $257 \rightarrow (13+3)^2+1$

3. (D) As, I L O R → Reverse → R O L I
 O K G C → Reverse → C K G O
 -3, -4, -5, -6

Similarly, A B K D → Reverse → D B K A
 Z Y P W → Reverse → W Y P Z
 -3, -4, -5, -6

4. (C) **Thailand** is a country, all others are Capital.

5. (C) $9^2 - 2 = 79$
 $13^2 - 2 = 167$
 $17^2 - 1 = 288$
 $15^2 - 2 = 223$

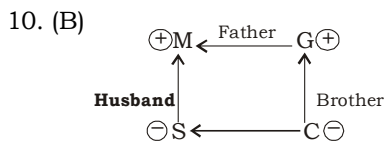
6. (A) Except CPA, all others have vowel in middle.

7. (C) Admin → Adminiculum → **Administer** → Administracion → Admissible.

8. (D) acbd cadb acbd cadb

9. (B) ATQ,

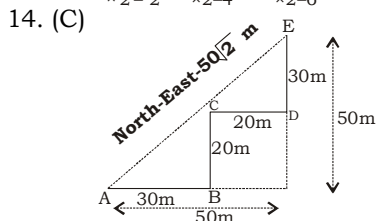
Required average age = $\frac{44 - 8}{2} = 18$ years



11. (D) $1000 \rightarrow 600 \rightarrow 700 \rightarrow 1500$
 $\times \frac{1}{2} + 100$, $\times 1 + 100$, $\times 2 + 100$

12. (C) $1.125 \rightarrow 4.25 \rightarrow 10.5 \rightarrow 23$
 $\times 2 + 2$, $\times 2 + 2$, $\times 2 + 2$

13. (D) $9 \rightarrow 16 \rightarrow 28 \rightarrow 50$
 $\times 2 - 2$, $\times 2 - 4$, $\times 2 - 6$



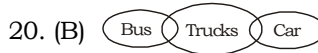
15. (C)

16. (D) $5 \times 4 + (5 + 4) = 29$
 $6 \times 7 + (6 + 7) = 55$
 $9 \times 8 + (9 + 8) = 89$

17. (D) $B \rightarrow 2, I \rightarrow 9 \Rightarrow 2 \times 9 = 18 \rightarrow R$
 $C \rightarrow 3, D \rightarrow 4 \Rightarrow 3 \times 4 = 12 \rightarrow L$
 $K = 11, B = 2 \Rightarrow 11 \times 2 = V$

18. (C) $(86 - 38) \times 5 = 240$
 $(72 - 21) \times 5 = 255$
 $(36 - 12) \times 5 = 120$

19. (D)



I. False

II. False

21. (B)

22. (B)

23. (C)

24. (A)

25. (C)

26. (B) Palghat Gap is a low mountain pass connecting the states of Kerala and Tamil Nadu in India. The gap, at an elevation of 140 m, is the lowest pass and only gap in the 1600 km long stretch of Western Ghats.

27. (B) David Grossman has become the first Israeli author to win the 2017 Man Booker International prize for his novel "A Horse Walks into a Bar". The novel was translated by Jessica Cohen and is published in Britain by Jonathan Cape. To be considered for the prize, books had to be translated into English and published in the UK between May 1, 2016 and April 30, 2017.

28. (A) Because of some ambiguity in laws and basic structure of the Constitution, Sir Ivor Jennings called it "Paradise of lawyers". But most of the lawmakers around the world disagree to such categorization.

29. (B) The Central Statistics Office (CSO), under the Ministry of Statistics and Programme Implementation, is responsible for macroeconomic data gathering and statistical record keeping. Its processes involve conducting an annual survey of industries and compilation of various indexes like the Index of Industrial Production (IIP), Consumer Price Index (CPI), etc.

30. (C) Dr. Neeru Chadha has become the first Indian woman to be elected as the judge of the International Tribunal for the Law of the Sea (ITLOS) for a nine-year term from 2017 to 2026. She got most of the votes in Asia Pacific Group. With this election, Dr. Chadha has also become the first Indian woman to occupy a top UN position, after Vijaya Lakshmi Pandit, who served as the President of the United Nations General Assembly (UNGA). The Hamburg-based ITLOS, established in 1996, is one of dispute settlement mechanisms under the UN Convention on the Law of the Sea (UNCLOS) that entered into force in 1994.
31. (C) The book titled "Nathuram Godse –The Story of an Assassin" authored by Anup Ashok Sardesai has been released on the death anniversary of Mahatma Gandhi on January 30, 2016.
32. (D) All of the options are the ways to conserve our water resources.
33. (A) Bleaching powder is prepared on the large scale by Hasen Clever process. The plant consists of a number of iron cylinders in which chlorine is brought in contact with slaked lime $[Ca(OH)_2]$.
35. (D) The Telangana government has launched Pashu Bazar website for online cattle sale. The online sale or purchase of cattle through pashubazar.telangana.gov.in website will help farmers as the cattle need not be brought to shandies every time and farmers can save on transportation cost on cattle. Farmer can keep maximum five registrations for sale at any time.
36. (B) The 'Black Hole' event was sensationalized by Holwell. Black Hole of Calcutta, scene of an incident on June 20, 1756, in which a number of Europeans were imprisoned in Calcutta (now Kolkata) and many died. The Europeans were the remaining defenders of Calcutta following the capture of the city by nawab Siraj al-Dawlah, of Bengal, and the surrender of the East India Company's garrison under the self-proclaimed governor of Bengal, John Z. Holwell. The incident became a cause célèbre in the idealization of British imperialism in India and a subject of controversy.
37. (B) Garba is a folk dance among the following dances in India. Garba is a form of dance which was originated in the state of Gujarat in India. The name is derived from the Sanskrit term Garbha and Deep. Many traditional garbas are performed around a centrally lit lamp or a picture or statue of the Goddess Shakti. Kathakali Manipuri and Mohiniyattam are classical dance of India.
38. (A) A writ of Mandamus can be issued by a judge at a petitioner's request when the authority of a higher court is needed to compel an action by an individual person, a government agency, or a lower court to do something they are legally required to do.
39. (B) Fructose is the sweetest sugar. Fructose, or fruit sugar, is a simple ketone monosaccharide found in many plants, where it often bonds to glucose to form the disaccharide sucrose.
41. (C) The net charge of the ionic compound is zero. It is composed of one ion of calcium with a positive two charge and two ions of fluorine with a negative one charge on each. The charges cancel out, leaving the compound with no net charge. The chemical formula for calcium fluoride is CaF_2 . It is a crystalline solid that is commonly found in a mineral called fluorite or fluorspar.
43. (B) The three state-run Oil Marketing Companies (OMCs) – Indian Oil Corporation (IOC), Hindustan Petroleum Corp Ltd (HPCL) and Bharat Petroleum Corp Ltd (BPCL) have signed an agreement to jointly set up the world's largest refinery and petrochemical complex at Ratnagiri district of Maharashtra at a cost of \$40 billion. The IOC will hold 50% stake and HPCL & BPCL will take 25% stake each in the new complex. The refinery will produce petrol, diesel, LPG, ATF and feedstock for making petrochemical that are basic building blocks in plastic, chemical and textile industries. The refinery is expected to be completed by 2022.

44. (C) In 1812, the Pindaris plundered the districts of Mirzapur and Shahabad and in 1815 they raided the Nizam's dominions. In 1816, they plundered the Northern Circars. Lord Hastings determined to suppress the Pindaris. For this he gathered a large army of 1,13,000 men and 300 guns and attacked the Pindaris from four sides. He himself took command of the force from the north while Sir Thomas Hislop commanded the force from the south. By 1818, the Pindaris were completely suppressed and all their bands disintegrated. Karim Khan was given a small estate in the Gorakhpur district of the United Provinces. Wasil Muhammad took refuge in the Scindia's camp but the latter handed him over to the British.

47. (C) Radius of a capillary tube is inversely proportional to the height of the liquid column. So, if radius of the tube is doubled, rise of level of water will become half of the previous rise in capillary tube.

48. (B) Ethylene is a rather stable molecule that polymerizes only upon contact with catalysts. The conversion is highly exothermic, that releases a lot of heat. Coordination polymerization is the most pervasive technology, which means that metal chlorides or metal oxides are used. The most common catalysts consist of titanium (III) chloride. Ethylene can be produced through radical polymerization, but this route is only limited utility and typically requires high pressure apparatus.

50. (A) The Battle of Ten Kings was fought on the bank of river Parushni. According to the sources, the reason behind the war was the rivalry between Vishwamitra and Vasishtha.

51. (B) ATQ,

$$(\sin \theta + \cos \theta)^2 = 7$$

$$\Rightarrow \sin^2 \theta + \cos^2 \theta + 2 \sin \theta \cos \theta = 7$$

$$\Rightarrow 2 \sin \theta \cos \theta = 6$$

$$\Rightarrow \sin \theta \cos \theta = 3$$

then,

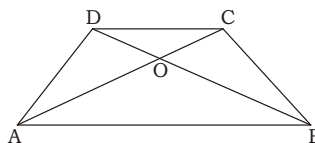
$$\tan \theta + \cot \theta = \frac{\sin \theta}{\cos \theta} + \frac{\cos \theta}{\sin \theta} = \frac{1}{\sin \theta \cos \theta}$$

$$= \frac{1}{3}$$

52. (B) ATQ,

$$\begin{aligned} \text{Required C.P.} &= 1600 \times \frac{100}{128} \times \frac{100}{500} \times \frac{100}{120} - 110 \\ &= \text{₹}1140 \end{aligned}$$

53. (D) ATQ,



$$\Delta AOB \parallel \Delta DOC$$

$$[\because AB \parallel DC]$$

then,

$$\frac{\text{area } \Delta AOB}{\text{area } \Delta COD} = \left(\frac{AB}{CD}\right)^2$$

$$\Rightarrow \frac{108}{x} = \left(\frac{3 \text{ CD}}{\text{CD}}\right)^2 \Rightarrow x = 12 \text{ cm}^2$$

Hence, the area of $\Delta COD = 12 \text{ cm}^2$

54. (C) ATQ,

$$a + 1 = \sqrt{2} + 1 + 1 = 2 + \sqrt{2} \text{ and,}$$

$$b + 1 = \sqrt{2} - 1 + 1 = \sqrt{2}$$

then,

$$\frac{1}{2 + \sqrt{2}} + \frac{1}{\sqrt{2}} = \frac{2 - \sqrt{2} + \sqrt{2}}{2} = 1$$

55. (C) ATQ

A	:	B	B	:	C
83		76	76		85
		79			81
		3	:	4	4
				:	5

Then, A : B : C = 3 : 4 : 5

Hence, Required Average

$$\begin{aligned} &= \frac{3(83) + 4(76) + 5(85)}{3 + 4 + 5} \\ &= \text{81.5} \end{aligned}$$

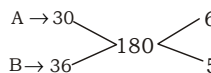
56. (D) ATQ,

$$\frac{P \times \frac{R}{2} \times R}{100} = \frac{8}{25} P$$

$$\Rightarrow R = 8\%$$

Hence, rate of interest = 8%

57. (B) ATQ,



$$\begin{aligned} \text{Hence, Required days} &= \frac{180 - (25 \times 5)}{6 + 5} \\ &= \text{5 days} \end{aligned}$$

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58. (C) Number = ratio \times HCF
 $= (3 : 5) \times 21$
 $= 63 : 105$
 Then, the larger number = **105**

59. (C) ATQ,
 $y^4 - x^2 y^2 + 1 + x^4 - x^2 y^2 - 1 = x^4 - 2x^2 y^2 + y^4$
 $= (x^2 - y^2)^2 = [(x + y)(x - y)]^2$
 $= \left[(2\sqrt{a}) \left(\frac{2}{\sqrt{a}} \right) \right]^2 = (2 \times 2)^2 = \mathbf{16}$

60. (A) ATQ,
 $\frac{d/4}{15} + \frac{3d/4}{18} = 7$
 $\Rightarrow \frac{d}{4} \times \frac{(6+15)}{90} = 7$
 $\Rightarrow d = \frac{7 \times 90 \times 4}{21} = 120 \text{ km}$
 Hence, Required distance = **120 km**

61. (D) Required Price = $\frac{22500}{45} \times 75 = \mathbf{₹37500}$

62. (D) Required Ratio = 75 : 105
 $= \mathbf{5 : 7}$

63. (B) Required Ratio =
 $\frac{(105 - 75) \times 100}{75} : \frac{(135 - 105) \times 100}{105}$
 $\Rightarrow \frac{30}{75} : \frac{30}{105}$
 $\Rightarrow \mathbf{7 : 5}$

64. (B) ATQ,
 $4\pi(r+3)^2 - 4\pi r^2 = 1056$
 $\Rightarrow 4\pi(r+3)^2 - r^2 = \frac{1056 \times 7}{4 \times 22} = 84$
 $\Rightarrow r^2 + 6r + 9 - r^2 = 84$
 $\Rightarrow 6r = 75$
 $\Rightarrow r = \frac{75}{6} = 12.5 \text{ m}$

Hence, Required radius = **12.5 m**

65. (D) A : B
 $5 \times 8 : 6 \times x$
 Profit 5 : 9
 then,

$$\frac{5 \times 8}{6 \times x} = \frac{5}{9}$$

$\Rightarrow x = 12$

Hence, Required Time = **12 months**

66. (C) ATQ,
 $x \cos \theta - \sin \theta = 1$
 $\Rightarrow x^2 = \frac{(1 + \sin \theta)^2}{\cos^2 \theta} = \frac{(1 + \sin \theta)^2}{1 - \sin^2 \theta} = \frac{1 + \sin \theta}{1 - \sin \theta}$

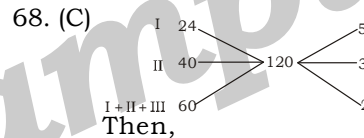
Then, $x^2 - (1 + x^2) \sin \theta$
 $= \frac{1 + \sin \theta}{1 - \sin \theta} - \left(\frac{1 - \sin \theta + 1 + \sin \theta}{1 - \sin \theta} \right) \times \sin \theta$
 $= \frac{1 + \sin \theta - 2 \sin \theta}{1 - \sin \theta} = \frac{1 - \sin \theta}{1 - \sin \theta} = \mathbf{1}$

67. (D) ATQ,
 $x - y = \frac{60}{7 \frac{1}{2}} = 8$

and,

$$x + y = \frac{60}{4} = 15$$

Then, Required ratio = $x : y$
 $= \frac{15 + 8}{2} : \frac{15 - 8}{2}$
 $= \mathbf{23 : 7}$



$$\text{Required Capacity of Tank} = \frac{120}{(5 + 3 - 2)} \times 30 = \mathbf{600 \text{ gallons}}$$

69. (D) ATQ,
 $\frac{x - y}{x + y} = \frac{1}{7} \Rightarrow \frac{x}{y} = \frac{4}{3}$ ----- (i)

and,

$$\frac{x - y}{xy} = \frac{1}{24} \Rightarrow 24x - 24y = xy$$

From equation (i),

$$\Rightarrow 24x - 24 \times \frac{3x}{4} = \frac{3}{4} x \times x$$

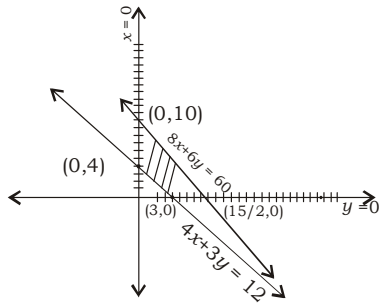
$$\Rightarrow 6x = \frac{3}{4} x^2 \Rightarrow x = 8$$

Then, $y = 6$

Hence, square root of the sum of their square = $\sqrt{64 + 36} = \mathbf{10}$

70. (C) ATQ,
 $\frac{x - 21}{x} \times 100 = x$
 $\Rightarrow 100x - 2100 = x^2$
 $\Rightarrow x^2 - 100x + 2100 = 0$
 $\Rightarrow (x - 30)(x - 70) = 0$
 Then,
 $x = 30$ or $x = 70$
 Hence, the cost price = **₹30** or **₹70**

71. (D)



$4x + 3y = 12$ passes through the points $(3,0)$ and $(0,4)$

$8x + 6y = 60$ passes through the points

$(\frac{15}{2}, 0)$ and $(0, 10)$

$$\begin{aligned} \therefore \text{Required Area} &= \frac{1}{2} \times 10 \times \frac{15}{2} - \frac{1}{2} \times 4 \times 3 \\ &= 37.5 - 6 \\ &= \mathbf{31.5 \text{ unit}^2} \end{aligned}$$

72. (D) ATQ,

$$\begin{aligned} x^3 - 3x^2 + 3x - 1 &= 28 - 1 \\ \Rightarrow x^3 - 1 - 3x^2 + 3x &= 27 \\ \Rightarrow (x-1)(x^2 + 1 + x) - 3x(x-1) &= 27 \\ \Rightarrow (x-1)(x^2 + 1 + x - 3x) &= 27 \\ \Rightarrow (x-1)(x-1)^2 &= 27 \\ \Rightarrow (x-1)^3 &= 3^3 \\ \Rightarrow x &= \mathbf{4} \end{aligned}$$

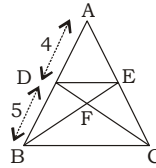
73. (C) $\frac{4}{3} \pi \times 3 \times 3 \times 3 = \pi (5^2 - r^2) \times 4$

$$\Rightarrow 9 = 5^2 - r^2$$

$$\Rightarrow r = 4$$

Hence, thickness of pipe = $(5 - 4) = \mathbf{1 \text{ cm}}$

74. (B)



$\Delta ABC \sim \Delta ADE$ (DE || BC)

$$\Rightarrow \frac{DE}{BC} = \frac{AD}{AB} = \frac{4}{9}$$

then, $\Delta DEF \sim \Delta CBF$ (DE || BC)

$$\Rightarrow \frac{DE}{BC} = \frac{4}{9}$$

$$\begin{aligned} \text{Hence, Required ratio} &= \frac{\text{area DEC}}{\text{area CBF}} = \left(\frac{DE}{BC}\right)^2 \\ &= \frac{(4)^2}{(9)^2} = \frac{\mathbf{16}}{\mathbf{81}} \end{aligned}$$

75. (D) A : B : C

$$\frac{5}{5} : \frac{4}{4} \times 9$$

$$\frac{9}{9} : \frac{10}{10} \times 4$$

$$45 : 36 : 40$$

$$\text{Then, Required amount} = \frac{2420 \times 40}{121} = \mathbf{₹800}$$

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Abuse	harsh insulting language	गाली
Banish	to cause (something) to go away	दूर करना
Blaxploitation	the exploitation of blacks	काले लोगो का शोषण
Camaraderie	a spirit of friendly good-fellowship	सौहार्द-भाव
Colonialism	control by one country over another and its people	उपनिवेशवाद
Deflate	to release air or gas from	हवा निकालना
Dermatologist	skin specialist	त्वचा-चिकित्सक
Deterrence	the inhibition of criminal behaviour by fear especially of punishment	निवारण
Eradicate	to destroy completely	पूर्ण रूप से नाश करना
Horologist	a maker of clocks or watches	घड़ी बनाने वाला
Inflate	to swell with air or gas	फुलाना
Landscape	a picture representing a view of natural inland scenery	परिदृश्य
Lapidist	one skilled in working with precious stones	कीमती पत्थरों के साथ काम करने में कुशल
Migrant	a person who moves from one place to another in order to find work or better living condition	प्रवासी
Neurosurgeon	a surgeon specializing in surgery of the nervous system, especially the brain and spinal cord.	न्यूरो-सर्जन
Nomad	people that travels from place to place and has no permanent home.	घूमने वाली जाति
Philatelist	one who collects stamps	डाक के टिकटो का संग्राहक
Privilege	a special right given to some people	विशेषाधिकार
Rheumatologist	specialist of disorders of the joints, muscles, and ligaments	संधिवातीय-विशेषज्ञ
Solecism	a grammatical mistake in speech or writing	व्याकराणिक गलती
Solitary	without anyone or anything else	अकेला, एकान्त
Subaltern Officer	a junior officer	छोटे पद का अधिकारी
Swindler	a person who cheats	ठग, धोखेबाज
Truant	a person who neglects his or her duty, one who is absent from job without permission	कर्तव्य से भागने वाला व्यक्ति
Urologist	specialist of urinary system	मूत्र विज्ञानी
Vagabond	a person who wanders from place to place without a home or job	इधर उधर भटकने वाला व्यक्ति
Wanderer	a person who travels aimlessly	घुमक्कड़

SSC MOCK TEST - 104 (ANSWER KEY)

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|--|---|
| <p>1. (B) 26. (B)</p> <p>2. (D) 27. (B)</p> <p>3. (D) 28. (A)</p> <p>4. (C) 29. (B)</p> <p>5. (C) 30. (C)</p> <p>6. (A) 31. (C)</p> <p>7. (C) 32. (D)</p> <p>8. (D) 33. (A)</p> <p>9. (B) 34. (A)</p> <p>10. (B) 35. (D)</p> <p>11. (D) 36. (B)</p> <p>12. (C) 37. (B)</p> <p>13. (D) 38. (A)</p> <p>14. (C) 39. (B)</p> <p>15. (C) 40. (B)</p> <p>16. (D) 41. (C)</p> <p>17. (D) 42. (A)</p> <p>18. (C) 43. (B)</p> <p>19. (D) 44. (C)</p> <p>20. (B) 45. (A)</p> <p>21. (B) 46. (C)</p> <p>22. (B) 47. (C)</p> <p>23. (C) 48. (B)</p> <p>24. (A) 49. (B)</p> <p>25. (C) 50. (A)</p> | <p>51. (B) 76. (D)</p> <p>52. (B) 77. (C)</p> <p>53. (D) 78. (B)</p> <p>54. (C) 79. (D)</p> <p>55. (C) 80. (B)</p> <p>56. (D) 81. (A)</p> <p>57. (B) 82. (D)</p> <p>58. (C) 83. (C)</p> <p>59. (C) 84. (A)</p> <p>60. (A) 85. (B)</p> <p>61. (D) 86. (D)</p> <p>62. (D) 87. (C)</p> <p>63. (B) 88. (B)</p> <p>64. (B) 89. (D)</p> <p>65. (D) 90. (B)</p> <p>66. (C) 91. (C)</p> <p>67. (D) 92. (C)</p> <p>68. (C) 93. (B)</p> <p>69. (D) 94. (A)</p> <p>70. (C) 95. (A)</p> <p>71. (D) 96. (B)</p> <p>72. (D) 97. (B)</p> <p>73. (C) 98. (C)</p> <p>74. (B) 99. (A)</p> <p>75. (D) 100. (B)</p> |
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- 76.(D) The formula applicable here is: S + V₂, S + would + V₁
- 77.(C) After possessive adjective V₁+ing form is used.Hence change 'recommend' into 'recommending'.
- 78.(B) Remove preposition 'with' from the second part of the sentence.
- 79.(D) 'Put off' is a phrasal verb which means 'to postpone or delay'.
- 81.(A) 'Out of print' is a phrasal verb which means '(of a book) no longer available from the publisher'.
- 88.(B) 'By and large' means 'on the whole'. (सब मिलाकर, सामान्यतः)
- 89.(D) 'Nonplussed' means 'so surprised and confused that one is unsure how to react'.

- 90.(B) 'Marry' is followed by direct object without any preposition in active voice and 'to' in passive voice but here 'to whom' is already there so there is no need of repeating 'to'.
- 91.(C) Given sentence is a conditional sentence and it follows following formula:
Had+ sub + V₃ + Object, Subject + would + have + V₃
For more details refer to chapter 7 of Volume- 1
92. (C) According to the rules of parallelism the verbs used in a sentence should be in the same form. See Volume-2.

MOCK-103 Correction

12. (*) Replace 204 as 208 and 1025 as 1045.
81. (A)

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.

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