SSC MOCK TEST – 102 (SOLUTION)

1. (B) As, Frame surrounds a Picture. Similarly, Binding surrounds a **Book**

2. (A) As, $2 \times (6)^2 = 72$
   Similarly,
   $$2 \times (4)^2 = \textbf{32}$$

3. (D) As,

   Similarly,

4. (C) AS,

   Similarly,

5. (D) **63** is not a prime number.

6. (D) Except **Attack,** others are synonym

7. (B)

8. (D) Except **YELLOW**, others are primary colour.

9. (C) Extra day = 1(1993) + 1 (1994) + 1 (1995) + 1 (1996) = 4
   Then, Required day = Sunday + 4 = **Thursday**

10. (D) Magainin → Magazine → Magendie → Magistrate.

11. (C) tsttsttstt<u>s</u>t

12. (B)

13. (B)

14. (D) As,

   Similarly,

15. (A)

16. (D)

   E   M   P   T   Y
   ↓   ↓   ↓   ↓   ↓
   2   5   4   3   1

17. (C) $60 = 3 \times (47 – 27)$
   $9 = 3 \times (8 – 5)$
   $\textbf{27} = 3 \times (20 – 11)$

18. (B) $47 = 5 \times 7 + (5 + 7)$
   $89 = 8 \times 9 + (8 + 9)$
   $\textbf{53} = 5 \times 8 + (8 + 5)$

19. (B)

40 km (top), 20 km (left), 20 km (right), 20 km (bottom left), **20 km** (bottom right)

20. (B)

21. (A) Rotate to clockwise from 1

$$\frac{3}{4}, \frac{2}{5}, \frac{1}{6}$$

22. (D)

Pages — Pens — Letters
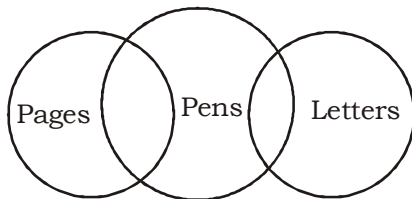
I. False.
II. False.

23. (A)

24. (C)

25. (A)

26. (B) Radar is an object detection system that uses electromagnetic waves to identify the range, altitude, direction, or speed of both moving and fixed objects such as aircraft, ships, motor vehicles, weather formations, and terrain.

27. (C) S Ganesh Kumar has been appointed the new Executive Director (ED) of Reserve Bank of India (RBI). He succeeded Chandan Sinha, who has taken voluntary retirement on May 31, 2017. As Executive Director (ED), Kumar will look after the departments of Information Technology, Payment and Settlement Systems and External Investments and Operations.

28. (A) The Three Language Formula was devised in the chief ministers conferences held during 1961. The National Commission on Education was also known as the Kothari commission. It examined and recommended a graduated formula, which was recommended by the 1968 policy.

29. (B) Inventory refers to raw materials, work-in-process and finished goods. That are considered to be the portion of a business assets that are ready or will be ready for sale. Inventory are also represented as one of the most important assets that most businesses possess because the turnover of inventory represents one of the primary sources of revenue generation and subsequent earnings for the company's shareholders/owners.

30. (B) The World Milk Day (WMD) is observed every year on 1st June by the Food and Agriculture Organization (FAO) to recognize the importance of milk as a global food. The day is intended to provide an opportunity to bring attention to activities that are connected with the dairy sector. In India, the National Milk Day (NMD) is observed every year on 26th November to mark the birth anniversary of Dr. Verghese Kurien, the father of White Revolution.

32. (A) The frog excretes urea. It is carried by blood into the kidney where it is separated and excreted.

33. (B) Blue sapphire and ruby are obtained from natural mineral "Corundum". The chemical composition of corundum is "Aluminium oxide" Al_2O_3.

34. (B) The refractive index is proportional to the wavelength, so the longer the wavelength the more it refracts. Red has the longest wavelength we can see, so the red letters will appear more raised up than any other colour. Blue/violet have the shortest wavelengths, so the Blue/Violet coloured letter will appear lower than any other colour.

35. (D) The Sri Venkateshwara National Park is located at Chittoor and Cuddapah districts in Andhra Pradesh. The total area of the park is 353 km². The park is known for its waterfalls including the Talakona, Gundalakona and Gunjana.
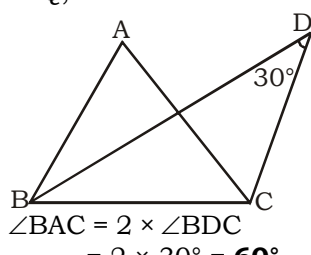
36. (D) Chandragupta-I married to the daughter of Licchhavis, a royal influential family. His son and successor 'Samudragupta' calls himself Lichchavi-dauhitra.

37. (C) Alaknanda river meets with the Dhauliganga river at Vishnuprayag, the Nandakini river at Nandprayag, the Pindar river at Karnaprayag, the Mandakini river at Rudraprayag and finally the Bhagirathi river at Devprayag to form the mainstream, the Ganges.

38. (A) The reservation of 27% government jobs for other Backward Classes was declared for the first time in the year 1990 by the Vishwanath Pratap Singh government.

40. (C) The Supreme Court has special advisory jurisdiction in matters which may be specifically referred to it by the President of India under Article 143 of the Indian Constitution.

41. (D) The reaction of Calcium carbide reacts with water to producing acetylene gas and calcium hydroxide.

$$CaC_2 + 2H_2O \rightarrow C_2H_2 + Ca(OH)_2$$

42. (C) The break-even point (BEP) in economics, business, and specifically in cost accounting, is the point at which total cost and total revenue are equal i.e there is no net loss or gain.

43. (A) The Punjab government has decided to collaborate with the United Nations Office on Drugs and Crime (UNODC) as part of its efforts to root out the drug menace in the State. The MoU will be signed between the health department, the Special Task Force (STF) on drugs and the UNODC in the second week of June 2017. It was also decided to develop a roadmap for the project implementation for which a project committee will be set up.

44. (A) Madhubani painting or Mithila painting is a style of Indian painting, practiced in the Mithila region of Bihar state, India and the adjoining parts of Terai in Nepal. Painting is done with fingers, twigs, brushes, nib-pens, and matchsticks, using natural dyes and pigments.

45. (B) River Hoover dam is a concrete and gravity dam in black canyon of the Colorado river on the Border between the US states of Arizona and Nevada.

46. (B) Galaxy NGC 1277 is a small, flattened galaxy that contains one of the most massive central black holes ever found. At 17 billion solar masses, the black hole weighs an extraordinary 14% of the total galaxy mass.

48. (C) Magnesium hydroxide is an inorganic compound with the chemical formula of hydrated $Mg(OH)_2$. It is often known as milk of magnesia, because of its milk-like appearance as a suspension. While magnesium hydroxide has a low solubility in water, with a Ksp of 1.5×10^{-11}, it is large enough that it will partially dissolve to produce ions in the solution and forming the suspension.

50. (A) Abanindranath Tagore had founded Indian Society of Oriental Art in Kolkata to revive the ancient art traditions of India. He was the principal of government school of art and a great artist of modern India.

51. (A) ATQ,
$(4m + 10w) \times 24 = (10m + 4w) \times 18$
$1 m = 2 w$ .... (i)
Word done by 18 men and 36 women

$$= \frac{(10m + 4w) \times 18}{(18m + 36w)}$$

By the equation (i),

$$= 12m \times \frac{18}{36m} = \textbf{6 days}$$

52. (D) Principal $= \dfrac{12500 \times 12500}{18750}$

$$= ₹\textbf{8333}\frac{\textbf{1}}{\textbf{3}}$$

53. (A) $a^3 + b^3 = (a + b)(a^2 + b^2 - ab)$
$\Rightarrow a^3 + b^3 = (a + b)(a^2 + b^2 - ab + 2ab - 2ab)$
$\Rightarrow 28 = 4((a+b)^2 - 3ab)$
$\Rightarrow 7 = 16 - 3ab$
$\Rightarrow ab = 3$
Then, $(x^3 + y^3)(x + y) = x^4 + y^4 + xy(x^2 + y^2)$
$\Rightarrow 28 \times 4 = x^4 + y^4 + 3(x^2 + y^2 + 2xy - 2xy)$
$\Rightarrow 112 = x^4 + y^4 + 3((x^2 + y^2) - 2xy)$
$\Rightarrow 112 = x^4 + y^4 + 3(16 - 6)$
$\Rightarrow x^4 + y^4 = 112 - 30 = \textbf{82}$

Alternate
Put $a = 3$ and $b = 1$
$a^3 + b^3 = 28$ and $a + b = 4$
Then, $a^4 + b^4 = 81 + 1 = \textbf{82}$

54. (A) Required votes =

$$\frac{62500 \times (100 - 12) \times (100 - 52)}{100 \times 100} = \textbf{26400}$$

55. (C) Required average age $= \dfrac{37 + 32 + 7 \times 3}{2}$

$$= \frac{90}{2} = \textbf{45 years}$$

56. (A) ATQ,

$\angle BAC = 2 \times \angle BDC$
$= 2 \times 30° = \textbf{60°}$

57. (B) ATQ,

$$\frac{16}{16 + 65} = \left(1 - \frac{8}{x}\right)^4$$

Taking 4th root on both sides

$\Rightarrow \dfrac{2}{3} = 1 - \dfrac{8}{x}$

$\Rightarrow x =$ **24 liters**

58. (D) ATQ,

$$\tan A = \frac{1}{\sqrt{3}} = \tan 30°$$

$\Rightarrow A = 30°$

Then, cosec 30° + sec (90°– 30°) = 2 cosec 30°

= 2 × 2 = **4**

59. (B) Total profit without charity = $\dfrac{990 \times 20}{11}$

= ₹ 1800

Total profit = $\dfrac{1800 \times 100}{90}$ = **₹ 2000**

60. (A) ATQ,

A → 30, B → 50, C → 40 ⟩ 600 ⟨ 20, 12, 15

2 days work = A + B + A + C

= 20 + 12 + 20 + 15

= 67 units

Total number of pairs = $\dfrac{600}{67}$ = 8 pairs + 64 units

32 units is done by A + B on next day

So, Remaining units done by A+ C = $\dfrac{32}{35}$

Hence, Required Day = 8 × 2 + 1 + $\dfrac{32}{35}$

= **17$\dfrac{32}{35}$ Days**

61. (C) a² + 8b² + 9c² = 4b (a + 3c)

$\Rightarrow$ a² + 8b² + 9c² – 4ab – 12 bc = 0

$\Rightarrow$ (a² + 4b² – 4ab) + (4b² + 9c² – 12bc) = 0

$\Rightarrow$ (a – 2b)² + (2b – 3c)² = 0

$\Rightarrow$ Either a – 2b = 0 or 2b – 3b = 0

$\Rightarrow \dfrac{a}{b} = \dfrac{2}{1}$ or $\dfrac{b}{c} = \dfrac{3}{2}$

then a : b : c = **6 : 3 : 2**

62. (A) Required distence = $\dfrac{12}{60}$ × (20 + 5) = **5 km**

63. (B) Required percentage = $\dfrac{(135-15)}{135}$ × 100

= **88$\dfrac{8}{9}$**

64. (D) Total number of students

= 15 + 20 + 40 + 50 + 10 = **135**

65. (A) Required Percentage = $\dfrac{(50+10) \times 100}{135}$

= **44$\dfrac{4}{9}$**

66. (B) ATQ,

(x + 2)² = 9 and (y + 3)² = 25

$\Rightarrow$ x + 2 = ± 3 and y + 3 = ± 5

Then either x = – 5 or x = 7
and either y = – 8 or y = 2

Hence, maximum value = $\dfrac{-5}{-8}$ = **$\dfrac{5}{8}$**

67. (B) ATQ,
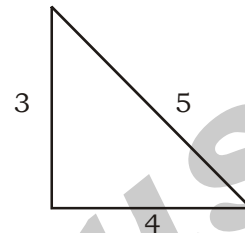
$\tan\theta = \dfrac{3}{4}$

Then, $\cos\theta = \dfrac{4}{5}$

In equation = $\dfrac{1 - \cos\theta}{1 + \cos\theta} = \dfrac{1 - \dfrac{4}{5}}{1 + \dfrac{4}{5}} = \dfrac{1}{9}$

68. (C) ATQ,

The length of AB = $\sqrt{(4-0)^2 + (5-0)^2} = \sqrt{41}$

The length of BC = $\sqrt{(9-4)^2 + (9-5)^2} = \sqrt{41}$

The length of CD = $\sqrt{(5-9)^2 + (4-9)^2} = \sqrt{41}$

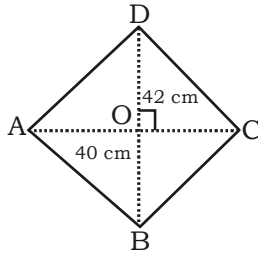The length of DA = $\sqrt{(0-5)^2 + (0-4)^2} = \sqrt{41}$

∴ All sides are equal but

Length of AC digonal = $\sqrt{(9-0)^2 + (9-0)^2}$

= $\sqrt{162} = 9\sqrt{2}$

Length of BD digonal = $\sqrt{(5-4)^2 + (4-5)^2} = \sqrt{2}$

The digonals are not equal but sides are equal.
Hence, it is a **Rhombus**

69. (B) ATQ,

DO = 21 cm

CO = 20 cm

then, DC = $\sqrt{21^2 + 20^2}$

= 29 cm   (Apply Pythagoras theorem)

Hence, Perimeter of Rhombus = DC × 4

= 29 × 4 = **116 cm**

70. (B) ATQ,

Let x be the cost price

$$\frac{x \times \dfrac{160 \times 85}{100}}{100} = 1496$$

$\Rightarrow \qquad\qquad x = ₹\ 1100$

Then, profit = 1496 – 1100 = **₹ 396**

71. (B) ATQ,

$$\tan\theta \times \frac{\sqrt{3}}{2} = \frac{\sqrt{3}}{2}$$

$\Rightarrow\ \tan\theta = 1$

$\Rightarrow\ \theta = 45°$

Then, $\sin(45° - 15°) = \sin 30° = \dfrac{1}{2}$

72. (B) ATQ,

$$\frac{9 \times 8}{1080} = \frac{8 \times 6}{x}$$
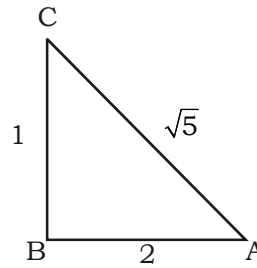
$\Rightarrow x = ₹\ \mathbf{720}$

73. (B) ATQ,

$5x \times x = 245 \times 2$

$\Rightarrow x^2 = 98$

$\Rightarrow x = 7\sqrt{2}$

Then, length of plot = $7\sqrt{2} \times 5 = \mathbf{35\sqrt{2}}$

74. (D) ATQ,

sin C + cot A + tan B

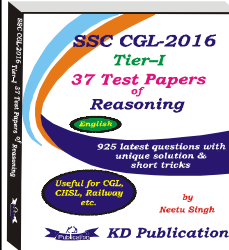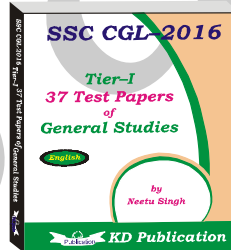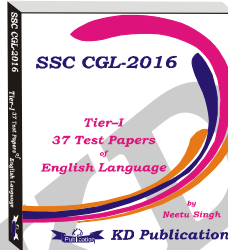$\Rightarrow\quad = \dfrac{2}{\sqrt{5}} + 2 + \infty = \mathbf{\infty}$

75. (B) According to the property of congruent, area of ABC = area of PQR

Hence, area of PQR = **72 cm²**
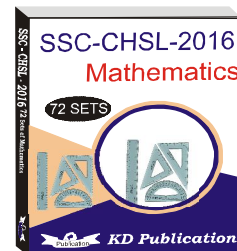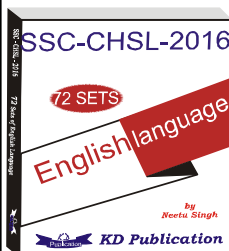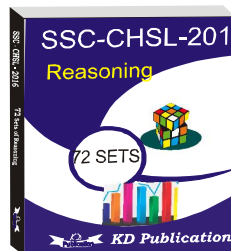
MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Adolescence	the period of life when a child develops into an adult	किशोरावस्था
Adroit	very clever or skillful	कुशल
Agility	the ability to move quickly and easily	फुर्ती
Alacrity	promptness in response	तत्परता
Amazon	a tall strong often masculine woman	लंबी बलशाली महिला
August	marked by majestic dignity or grandeur	प्रतापी, महान
Avail	to take advantage of	लाभ उठाना
Chromatics	branch of science that deals with colours	रंग सम्बन्धी विज्ञान
Circe	a women who lures men to destroy them	वैसी स्त्री जो पुरूष को लुभा कर बर्बाद कर देती है।
Clumsy	lacking skill or grace	अनाड़ी
Drudgery	dull, irksome and fatiguing work	अरूचिकर कार्य
Gladiator	a person engaged in a fight to the death as public entertainment for ancient Romans	योद्धा (जो लड़ाई मौत तक करें)
Haggle	to argue especially over a price	मोल भाव करना
Hilarious	extremely funny	हास्यप्रद
Honorarium	an amount of money paid for a service	परिश्रामिक
Legerity	quickness of mind or body	तेजी
Lugubrious	full of sadness or sorrow	विषादमय, दुखपुर्ण
Judas	someone who betrays someone else	धोखेबाज
Maladroit	very awkward, not skillful or adroit.	अकुशल
Martyr	a person who sacrifices his life for the sake of principle	शहीद
Mournful	full of sorrow, gloomy	दुख भरा
Perquisite	A benefit which one enjoys or is entitled to on account of one's job or position	अनुलाभ
Prerogative	a special privilege that some people have	विशेष अधिकार
Pyrotechnics	the art of making and use of fire works	आतिशबाजी बनाने का विज्ञान
Sinecure	a job or position in which someone is paid to do little or no work.	कार्यभार रहित नौकरी
Surrogate	one appointed to act in place of another	प्रतिनिधि
Thistle	a type of prickly plant	एक प्रकार का काँटेदार पौधा
Trenchant	very strong, clear and effective	प्रभावशाली, सुस्पष्ट
Virago	a woman of great stature, strength, and courage	बड़े कद-काठी वाली शक्तिशाली महिला

SSC MOCK TEST - 102 (ANSWER KEY)

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

76. (C) Given sentence is an assertive sentence (not an interrogative sentence), so there is no need of using inversion form. Replace 'did he' with 'he did'.

77. (A) Here from this structure, it seems that 'hat' is the 'subject' of sentence which is incorrect. Thus add 'while I was' before 'walking along the street'

78. (B) Given sentence is in 'Passive Voice', Thus replace 'cannot gathered' with 'cannot be gathered'.

79. (D) 'Between' is used for two person and 'among' is used for more than two.

80. (A) The word 'hanging around' means 'linger or wait'.

89. (A) 'Await' itself means 'to wait for'. It does not take prepostion 'for' with it.

90. (B) According to the sentence the verb should be in active voice and in past perfect tense. Hence replace 'were prepared' with 'had prepared'.

91. (B) Subjunctive constructions do not need 'should'.

92. (D) The sentence and question tag must be in the same tense. Be careful while using 'pronoun'. Refer to Chapter 5 of **Volume-1**

Correction Mock Test-101

57. Please read 4 : 7 as 7 : 4

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