SSC MOCK TEST - 273 (SOLUTION)

1. (B) One is antonym of the other.
2. (A) As, $61 = (4)^3 - 3$, $121 = (5)^3 - 4$, $337 = (7)^3 - 6$
   Therefore, ? = $(6)^3 - 5 = 211$
3. (D) As,

   B $\xrightarrow{\text{Reverse}}$ Y
   L $\xrightarrow{\text{Reverse}}$ O
   O $\xrightarrow{\text{Reverse}}$ L
   C $\xrightarrow{\text{Reverse}}$ X
   K $\xrightarrow{\text{Reverse}}$ P
   E $\xrightarrow{\text{Reverse}}$ V
   D $\xrightarrow{\text{Reverse}}$ W

   Similarly,

   L $\xrightarrow{\text{Reverse}}$ O
   A $\xrightarrow{\text{Reverse}}$ Z
   U $\xrightarrow{\text{Reverse}}$ F
   N $\xrightarrow{\text{Reverse}}$ M
   C $\xrightarrow{\text{Reverse}}$ X
   H $\xrightarrow{\text{Reverse}}$ S
4. (D) All other can be used to answer "**where**".
5. (A) All except **Barber** requires raw material to work.
6. (D)

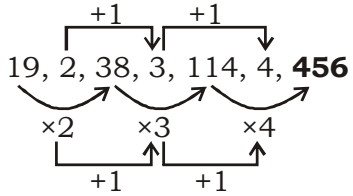
   3134 → $3 \times 4 = 12$ → $\Rightarrow 12 + 1 = 13$
   2157 → $2 \times 7 = 14$ → $\Rightarrow 14 + 1 = 15$
   5163 → $5 \times 3 = 15$ → $\Rightarrow 15 + 1 = 16$
   9384 → $9 \times 4 = 36$ → $\Rightarrow 36 + 1 = 37 \neq 38$
7. (C)
8. (B)

N	U	M	E	R	A	L
1	2	3	4	5	6	7
U	E	A	L	R	M	N
2	4	6	7	5	3	1

Similarly,

A	L	G	E	B	R	A
1	2	3	4	5	6	7
L	**E**	**R**	**A**	**B**	**G**	**A**
2	4	6	7	5	3	1

9. (C)



10. (D) 3, 12, 27, 48, 75, 108, **147**

3×1^2 3×2^2 3×3^2 3×4^2 3×5^2 3×6^2 $3\times7^2 = 3 \times 49$

11. (A)

12. (B) (15 + 12)/9 = **3**

and (44 + 28)/9 = **8**

Therefore, (64 + 53)/9 = **13**.

13. (C) (30 – 24) × 8 = **48**

and (23 – 12) × 8 = **88**

Therefore, (92 – 86) × 8 = **48**.

14. (C) Using the correct symbols, we have the given expression as

20 + 8 – 8 ÷ 4 × 2 = 20 + 8 – 2 × 2

= 20 + 8 – 4 = **24**

15. (A) Given :

S O I L D I S K

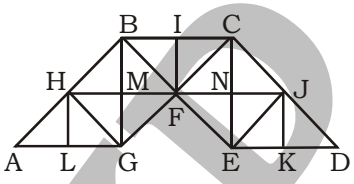
$ 4 % 6 5 % $ #

Then,

S	O	L	I	D
$	**4**	**6**	**%**	**5**

16. (B) The series is ab<u>b</u>/aa<u>a</u>bbb/<u>aaaab</u>bbb/a.

17. (C) The figure may be marked as shown.



Simple triangles are AHL, LHG, GHM, HMB, GMF, BMF, BIF, CIF, FNC, CNJ, FNE, NEJ, EKJ and JKD i.e. 14 in number.

Triangles composed of two components are AGH, BHG, HBF, BFG, HFG, BCF, CJF, CJE, JEF, CFE and JED i.e. 11 in number.

Triangles composed of four components are ABG, CBG, BCE and CED i.e. 4 in number.

Total number of triangles in the given figure = 14 + 11 + 4 = 29.

18. (A) Harsh is the single child of parent.

Wife of father's son means his wife.

His wife is the mother of the person whose portrait is there.

So, the portrait is of his child.

19. (D) S I K K I M T H L J J L

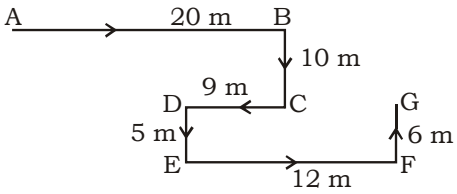
+1 −1 +1 −1 +1 −1

Similarly,

T R A I N I N G **U Q B H O H O F**

+1 −1 +1 −1 +1 −1 +1 −1

20. (B)



Now the Vinod is facing the North direction.

21. (B) At 5 o'clock, the hands are 25 minutes apart.

To be at right angles and that too between 5 : 30 and 6, the minute hand has to gain (25 + 15) = 40 min. spaces.

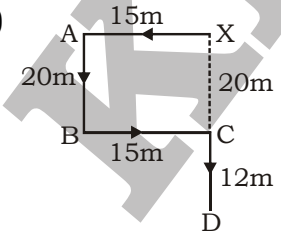
55 min. spaces are gained in 60 min.

40 min. spaces are gained in $\left(\frac{60}{55}\times 40\right)$ min = $43\frac{7}{11}$ min.

∴ Required time = $43\frac{7}{11}$ min. past 5.

22. (D)

23. (A)



Required distance = XD = XC + CD = 20 + 12

= 32 m in south direction

24. (D)

25. (C)

26. (A) The Mauryan emperor, Ashoka invaded Kalinga in 261 BC and after a fierce battle Kalinga was conquered. The 13th rock edict of Ashoka elaborates the Kalinga war.

27. (A) The First battle of Muhammad Ghori against a Hindu ruler was with Raja Bhimdev II of Gujarat who was a member of Solanki Dynasty. This is called "Battle of Gujarat" and it took place at Kayadra near Mount Abu. Raja Bhimdev II was young and real regent was his mother Naikidevi. Naikidevi inflicted such a major defeat to Muhammad Ghori that this invasion became Muhammad's first and last attack on India from the Gujarat side. He never turned to Gujarat again.

28. (A) Mahapadma Nanda (345 BC - 329 BC) was the founder of Nanda dynasty. Mahapadma Nanda was also known as Ekarat and Sarvakshatrantaka.

31. (D) Central Vigilance Commissioner and the Vigilance Commissioners would be four years from the date of entering office or till they attain the age of 65 years, whichever is earlier.

33. (C) During his five year rule from 1540 to 1545, Sher Shah Suri set up a new civic and military administration, issued the first Rupiya and reorganised the postal system of India.

34. (D) Two major measures for inflation, which are widely used, are Wholesale Price Index (WPI) and Consumer Price Index (CPI).WPI measures the increase in the prices of a fixed basket of goods prevailing in the wholesale market while CPI measures the increase in the prices of essential commodities purchased by an average consumer prevailing in the retail market. Measured weekly, WPI is the primary inflation measure in India.

35. (B) The earliest evidence of Agriculture in Indian subcontinent is found at Mehrgarh, which is located in Balochistan state of Pakistan.

36. (A) Rajaraja Chola I, popularly known as Raja. Raja the Great, was one of the greatest emperors of the Tamil Chola Empire of India who ruled between 985 and 1014 AD. By conquering several small kingdoms in South India, he expanded the Chola Empire as far as Sri Lanka in the south, and Kalinga (Orissa) in the northeast. One of the last conquests of Rajaraja was the naval conquest of the 'old islands of the sea numbering 12,000', the Maldives.

37. (C) By the 1960s, the Indian banking industry had become an important tool to facilitate the development of the Indian economy. The Government of India issued an ordinance ('Banking Companies (Acquisition and Transfer of Undertakings) Ordinance, 1969') and nationalised the 14 largest commercial banks with effect from the midnight of 19th July 1969.

39. (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.

40. (A) The Treaty of Bassein (Now called Vasai) was a pact signed on December 31st, 1802 between the British East India Company and Baji Rao II, the Maratha peshwa of Pune (Poona) in India after the Battle of Poona. The treaty was a decisive step in the dissolution of the Maratha Confederacy, which led to the East India Company's usurpation of the Peshwa's territories in western India in 1818.

44. (A) World Milk Day, established by the Food and Agriculture Organization (FAO) of the United Nations is observed annually on 1st June to recognise the importance of milk as a global food. It has been observed on June 1st each year since 2001. In India, the National Milk Day is observed on November 26th.

45. (A) Turgid : Hypotonic solution has lower solute concentration than cell cytoplasm, so by osmosis water will enter inside the cell.

50. (D) According to Article-54, Lok Sabha, Rajya Sabha and State Assemblies constitute together the electoral college to elect the President. But only Lok Sabha and Rajya Sabha are involved in impeachment (Article-61).

51. (A) Let the distance be x km.

$$\frac{x}{6-1.2} + \frac{x}{6+1.2} = 1$$

$$x\left(\frac{7.2+4.8}{4.8\times 7.2}\right) = 1$$

$$x = \frac{4.8\times 7.2}{12.0}\text{ km}$$

$= 4.8 \times 0.6$ km $= 2.88$ km

52. (D) Let the rate of interest = R% /annum

Formula,

$$A = P\left(1+\frac{R}{100}\right)^T$$

$$2420 = P\left(1+\frac{R}{100}\right)^2 \quad \ldots(i)$$

$$2662 = P\left(1+\frac{R}{100}\right)^3 \quad \ldots(ii)$$

Equation (ii) divided by (i),

$$1 + \frac{R}{100} = \frac{2662}{2420}$$

$$\frac{R}{100} = \frac{2662}{2420} - 1$$

$$\frac{R}{100} = \frac{2662-2420}{2420} = \frac{1}{10}$$

$$R = \frac{1}{10} \times 100 = 10\%$$

53. (D) Marked price $= \dfrac{450\times 100}{\left(100-\frac{50}{3}\right)}$

$$= \frac{450\times 100\times 3}{250} = ₹\ 540$$

54. (A) $2(B+C) = 9A$

$$\frac{A}{B+C} = \frac{2}{9}$$

A's Share $= \dfrac{A}{A+B+C} \times 770$

$= \dfrac{2}{11}\times 770 = ₹\ 140$

55. (C) C.P. of 4 dozen eggs = 24 ×4 = ₹ 96

C.P. of 2 dozen eggs = 32 ×2 = ₹ 64

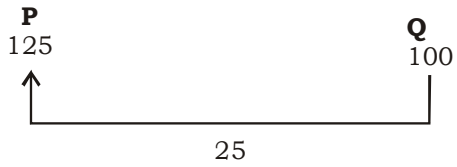
C.P. of 6 dozen eggs = ₹ 160

C.P. of one dozen eggs = ₹ $\frac{160}{6}$

Profit = 20%

Selling price = $\frac{160}{6} \times \frac{120}{100}$ = ₹ 32

56. (A)



Required percentage = $\frac{25}{125} \times 100 = 20\%$

57. (B) $66\frac{2}{3}\% \Rightarrow \frac{2}{3}$

Present		**Begining of 3rd year**
3	—	5
3	—	5
9	—	25
↓×3750		↓×3750
33750		93750

58. (C) $x + \frac{1}{x} = -2$

$x = -1$

Then,

$x^7 + \frac{1}{x^5} = -2$

59. (D) $P = 3 + \frac{1}{p}$

$P - \frac{1}{p} = 3$

Squaring on both sides,

$P^2 + \frac{1}{p^2} - 2 = 9$

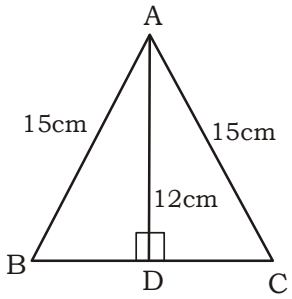
$P^2 + \frac{1}{p^2} = 11$

Again squaring on both sides,

$P^4 + \frac{1}{p^4} + 2 = 121$

$P^4 + \frac{1}{p^4} = 119$

60. (C)



In Δ ABD,

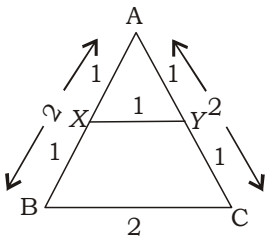
$BD^2 = AB^2 - AD^2$

$BD^2 = 15^2 - 12^2 = 27 \times 3$

$BD = \sqrt{81} = 9$ cm

and $BC = 2 \times BD = 2 \times 9 = 18$ cm

61. (D)



ATQ,

3 units = 12

1 unit = $\frac{12}{3} = 4$

$\therefore$ BC – XY = 4

62. (C) Take any value of θ between 0° to 90°.

Let θ = 45°

$\sin 45° = \frac{1}{\sqrt{2}}$

$\sin^2 45° = \frac{1}{2}$

cosec 45° = $\sqrt{2}$

Hence, $\sin\theta > \sin^2\theta$

63. (B) $x - y = 9$ .....(i)

$x^2 - y^2 = 207$

$(x + y)(x - y) = 207$

$x + y = \frac{207}{9} = 23$ .....(ii)

By solving (i) and (ii),

$x = 16$ and $y = 7$

64. (C) Correct Average = $35 + \frac{85-45}{20} = 37$

65. (C) $x^4 + x^2y^2 + y^4 = 6$

$(x^2+y^2)^2 - x^2y^2 = 6$

$(x^2 + y^2 + xy)(x^2 + y^2 - xy) = 6$

$x^2 + y^2 + xy = \frac{6}{2}$

$x^2 + y^2 + xy = 3$

66. (C) $a^2 + 4b^2 + -4ab + 9b^2 + c^2 - 6bc = 0$

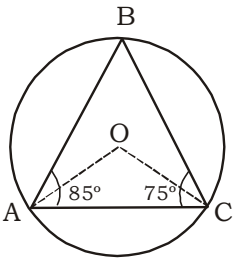
$(a-2b)^2 + (3b-c)^2 = 0$

$a = 2b$ & $3b = c$

$\frac{a}{b} = \frac{2}{1}$ and $\frac{b}{c} = \frac{1}{3}$

$a : b : c = 2 : 1 : 3$

67. (A)



$\angle B = 180° - (85° + 75°) = 20°$

$\angle AOC = 2\angle B = 2 \times 20 = 40°$

In ΔAOC,

$OA = OC$

$\therefore \angle OAC = \angle OCA$

$\angle OAC + \angle OCA + \angle AOC = 180°$

$2\angle OAC = 180° - 40°$

$\angle OAC = \frac{140}{2} = 70°$

68. (C) Inradius of equilateral $\Delta = \frac{a}{2\sqrt{3}}$

$\therefore x = \frac{2\sqrt{3}}{2\sqrt{3}} = 1$ cm

69. (C) $\tan 3\theta . \tan 7\theta = 1$

$\tan 7\theta = \frac{1}{\tan 3\theta}$

$\tan 7\theta = \cot 3\theta$

$\tan 7\theta = \tan(90° - 3\theta)$

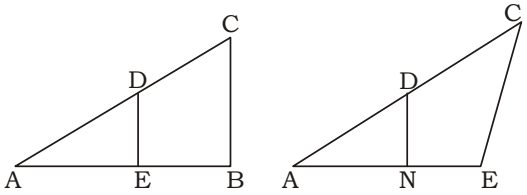
$7\theta = 90° - 3\theta$

$10\theta = 90°$

$\theta = 9°$

$\therefore \tan(\theta + 36°) = \tan 45° = 1$

70. (D)



In ΔABC,

DE||BC

$\frac{AD}{DC} = \frac{AE}{EB} = \frac{4}{5} = 4 : 5$ ...(i)

In ΔAEC,

EC||ND

$\frac{AN}{NE} = \frac{AD}{DC} = \frac{4}{5} = 4 : 5$ .....(ii)

Let AE = 40

EB = 50 and

$EN = 40 \times \frac{5}{9} = \frac{200}{9}$

$EN : EB = \frac{200}{9} : 50 = 4 : 9$

71. (B) C.I – S.I = $\frac{p \times r \times r \times (300 + r)}{100 \times 100 \times 100}$

$= \frac{40000 \times 8 \times 8 \times 308}{100 \times 100 \times 100} = ₹\,788.48$

72. (C) Required percentage = $\frac{871}{2085} \times 100 = 41.75\%$

73. (A) Average of special children = $\frac{2085}{5} = 417$

74. (D) Ariculatory disorder : speech disorder = 60 : 275 = 12 : 55

75. (A) Language disoder : average of remaing disorder = 657 : 357 = 219 : 119

MEANINGS IN ALPHABETICAL ORDER

Decimated	destroyed	बरबाद करना
Invincible	too powerful to be defeated or overcome, unbeaten	अजेय
Impregnable	unable to be captured or broken into, impenetrable	अभेद्य
Omnipresent	present everywhere at the same time	सर्वव्यापी
Potent	having great power, influence	प्रबल
Salvation	emancipation, exemption, Deliverance	मुक्ति
provincialism	a word or phrase peculiar to a local area	प्रांतीयवाद
Eminency	importance	महत्त्व
Inertness	anergy, indolence	निश्चेष्टता
Insistence	pertinacity, importunity	आग्रह
Ineptness	disqualification, ineptitude, incongruity	अयोग्यता, अक्षमता
Insolence	profaneness, disrespectfulness	बेअदबी, उग्रता
Thistlea	widely distributed herbaceous plant	कांटेदार पौधा
Stifle	make (someone) unable to breathe properly, suffocate	गला घोंटना
Sceptre	dominion, ascendancy	राजाधिकार राजदण्ड
Referendum	a general vote by the electorate on a single political question that has been referred to them for a direct decision	जनमत संग्रह
Tryst	a private, romantic rendezvous between lovers	छिप कर मिलने का स्थान
Oration	a formal speech, especially one given on a ceremonial occasion	भाषण
Culmination	the highest or climactic point of something, especially as attained after a long time	पराकाष्ठा
Soverign	possessing supreme or ultimate power	स्वायत्त, प्रभुत्व-संपन्न

SSC MOCK TEST - 273 (ANSWER KEY)

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

78. (C) The correct spelling is 'Diarrhea'.

79. (B) Change 'get off' into 'get over'. 'Get over' means 'to overcome'.

80. (A) Change 'best' into 'better'. 'Than' is preceded by a comparative degree.

81. (B) Change 'against' into 'with'. 'Disgusted' takes preposition 'with'.