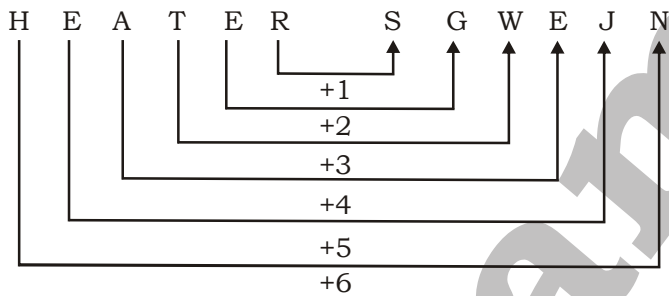
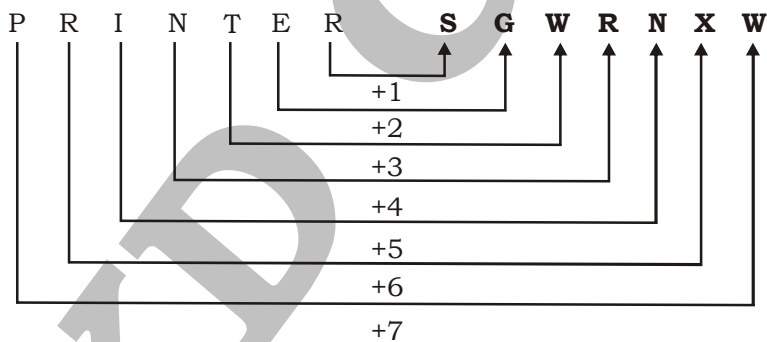


SSC MOCK TEST - 327 (SOLUTION)

1. (A) As, $2389 \Rightarrow 89 - 23 = 66$
Similarly, $2885 \Rightarrow 85 - 28 = 57$
2. (D) Dissemble is related to Feign, while Divulge is related to Disclose.
3. (C) (A) $11121 \Rightarrow 11^2 = 121$
(B) $13169 \Rightarrow 13^2 = 169$
(C) $15125 \Rightarrow 15^2 = 225 \neq 125$
(D) $17289 \Rightarrow 17^2 = 289$
4. (C) Except FT, others are pairs of opposite letters.
5. (C) As,

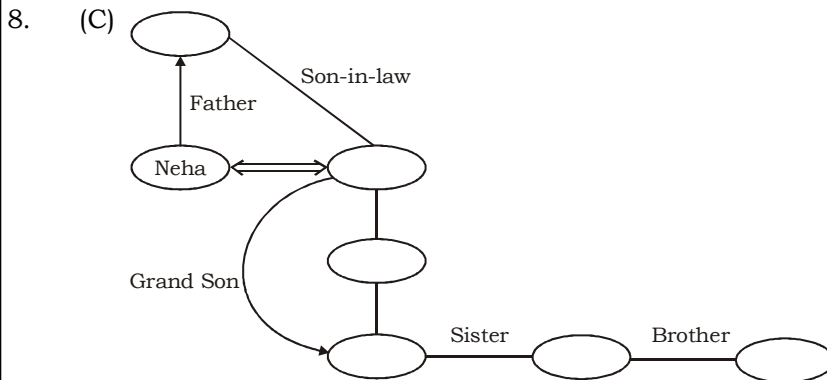


Similarly,



6. (D) $1256 - 12^2 = 1112$
 $1112 - 13^2 = 943$
 $943 - 14^2 = 747$
 $747 - 15^2 = 522$
 $522 - 16^2 = 266$

7. (C) X W U R N I
-1 -2 -3 -4 -5



Hence, the man is grandson of Neha.

9. (C) As, $49 \times 3 = 147$

$49 \times 5 = 245$

Similarly, $67 \times 3 = 201$

$67 \times 5 = 335$

10. (C) qplr/qplr/qplr/qplr

11. (B)

12. (D) **In the first row,**

$(15 - 6)^2 - 1 = 80$

In the second row,

$(17 - 8)^2 - 1 = 80$

In the third row,

$(21 - 13)^2 - 1 = 63$

13. (D) $198 + 11 \times 15 \div 16 - 25 = 261$

After changing + and \div ,

$198 \div 11 \times 15 + 16 - 25 = 261$

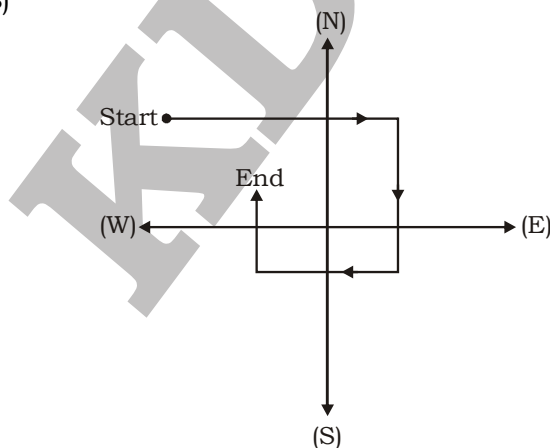
$18 \times 15 + 16 - 25 = 261$

$296 - 25 = 261$

$261 = 261$

14. (B) Clearly, the last bell rang 45 minutes before 7.45 AM. i.e., at 7.00 AM. But it happened five minutes before the priest gave the information to the devotee. So, the information was given at 7.05 AM.

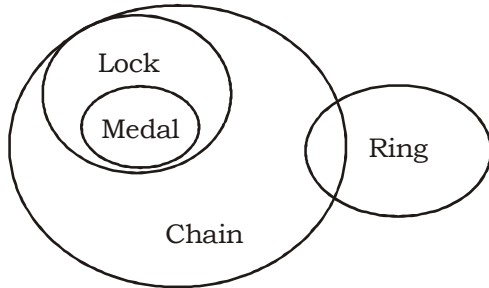
15. (B)



Clearly, Rohan is facing towards the North.

16. (A) 1. Hypodermic → 2. Hypocrite → 3. Hysterical → 4. Hypothermia → 5. Hypotenuse

17. (D)



I. True II. False III. False

Hence, only conclusion I follows.

18. (D) 19. (B)

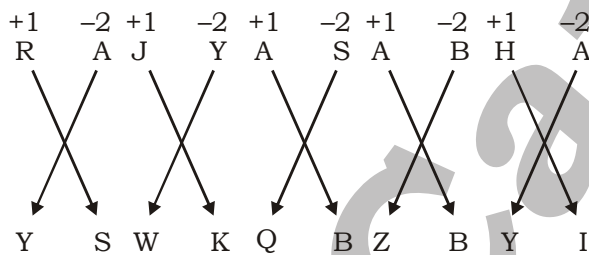
20. (C) As, $196 \Rightarrow 1 + 9 + 6 = 16$

$$(196 - 16 \times 5) = 116$$

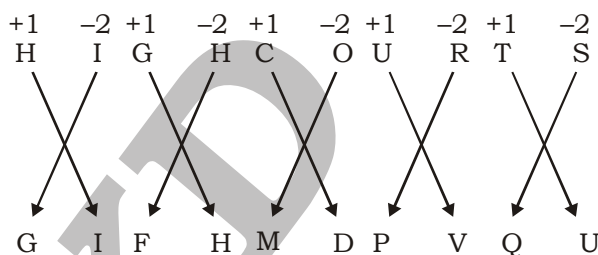
Similarly, $216 \Rightarrow 2 + 1 + 6 = 9$

$$(216 - 9 \times 5) = 171$$

21. (B) As,



Similarly,



22. (A) 23. (C) 24. (C) 25. (A)

27. (D) Krishnadeva Raya was the greatest of all the Vijayanagar rulers.

30. (D) Satellites are heavenly bodies revolving around the planets in definite orbits. There are at least 66 known satellites in our Solar System.

32. (B) The Cripps Proposals were rejected by the Muslim League which wanted India to be divided into two autonomous States with two separate Constituent Assemblies. Finally, a Cabinet Mission was sent to India. While it rejected the idea of two Constituent Assemblies, it put forth a scheme for the Constituent Assembly which more or less satisfied the Muslim League.

34. (A) Air contains 0.000091% of Xenon.

36. (C) Indra: 250 hymns are attributed to Indra. He was the Aryan warlord and also controlled the weather. He has been called 'Purandhar' or 'destroyer of forts' or 'breaker of the forts'. He has been addressed by various names - Ratheshtha, Jitendra, Somapa, Purandra, Vritirahan, and Maghayah. He was the proverbial Rain God (prajanya(A), responsible for causing rainfall. He was associated with thunder and storm and bore the thunderbolt (Vajr(A), with which he destroyed his enemies.
Varuna: He was the upholder to Rta or cosmic order and whatever happened in the world was thought to be the reflection of his desire. As an administrator of the cosmic law (Rt(A), he regulated all activities in the world. It is he who spread out the earth and set the Sun in motion. He is therefore called the world sovereign and is also regarded as the lord of human morality. His worship gives the earliest signs of Bhakti. In every hymn for Varuna, there is an appeal for forgiveness.
37. (C) Hasrat Mohani proposed adoption of complete independence in 1920, Ahmedabad session of Congress.
40. (D) Light from the nearest star reaches the earth in 4.3 years. The closest star to Earth are three stars in the Alpha Centauri system.
41. (A) Article-22 grants protection to persons who are arrested or detained. Detention is of two types, namely, Punitive and Preventive.
42. (B) North Macedonia's Parliament elected a new cabinet under a new Social Democratic leader, Dimitar Kovacevski.
43. (B) Osmosis is the passage of solvent molecules through a semipermeable membrane into a more concentrated solution. The kidney bladder acts as a membrane.
45. (B) The Non-Aligned Movement (NAM) is a group of countries considering themselves not aligned formally with or against any major power block. NAM was instituted in April 1955. It was founded in Belgrade in 1961 and was largely the brain child of Yugoslavia's President Josip Broz Tito, India's first Prime Minister Jawaharlal Nehru, Egypt's second President, Gamal Abdel Nasser, Ghana's First President Kwame NKurma and Indonesia's first President, Sukarno. The principles of NAM were defined in Bandung (Indonesi Declaration of 1955 and Broni (Yugoslavi Declaration of 1956, which is popularly known as Panchsheel Declaration'. The existing practice is to hold the Summit conference every three years. The basic objective of the association was in favour of peace, disarmament, economic and social development, eradication of poverty and illiteracy.
47. (C) Dr. S Radhakrishnan received the Bharat Ratna in 1954 and he became the President of India in 1962. APJ Abdul Kalam received this award in 1997 whereas he became the President in 2002.
49. (D) It loads using bootstrap loader.
50. (A) Centre-right lawmaker Roberta Metsola has been selected as the third woman to head the European Parliament.
51. (A) $32 \div 8 \times 4 + 15 \div 3 - 1 + 6 \text{ of } 4 \div (4 \times 2 - 2) - 3$
 $= \frac{32}{8} \times 4 + 15 \times \frac{1}{3} - 1 + 24 \div 6 - 3 = 16 + 5 + 3 - 3 = 21$
52. (B) Let the fifth number be x.
 Sixth number = x + 6
 Seventh number = x - 7
 Sum of last five numbers = $38 \times 5 = 190$
 Sum of first four numbers = $42 \times 4 = 168$
 Sum of twelve numbers = $45 \times 12 = 540$
 ATQ,
 $190 + 168 + x + x + 6 + x - 7 = 540$
 $3x = 183$
 $x = 61$
 Average of sixth and seventh number = $\frac{67 + 54}{2} = 60.5$

53. (A) LCM of 6, 7, 12 is 84

Let the total articles is $84 + 84 = 168$

$$\text{Total cost price} = \frac{1}{6} \times 84 + \frac{1}{7} \times 84 = ₹ 26$$

$$\text{Total selling price} = \frac{2}{12} \times 168 = ₹ 28$$

$$\text{Profit} = \text{SP} - \text{CP} = 28 - 26 = ₹ 2$$

But given that, total profit = ₹ 4

$$\text{Thus, total number of articles} = \frac{4}{2} \times 168 = 336$$

54. (B) $a^2 + b^2 - c^2 = 0$

Let, $a^2 = 1, b^2 = 1, c^2 = 2$

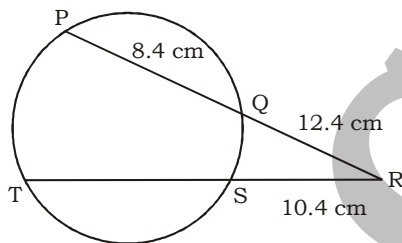
Then, $a^2 + b^2 - c^2 = 0$

$$\frac{2(a^6 + b^6 - c^6)}{3a^2b^2c^2}$$

$$= \frac{2[(a^2)^3 + (b^2)^3 - (c^2)^3]}{3a^2b^2c^2}$$

$$= \frac{2[1+1-8]}{3 \times 1 \times 1 \times 2} = -\frac{12}{6} = -2$$

- 55.(C)



$$RQ \times RP = RT \times RS$$

$$12.4 \times (12.4 + 8.4) = (10.4 + x) \times 10.4$$

$$\frac{12.4 \times 20.8}{10.4} = 10.4 + x$$

$$x = 24.8 - 10.4 = 14.4 \text{ cm}$$

56. (D) Let the radius be r_1 and r_2 .

ATQ,

$$\frac{\frac{4}{3}\pi r_1^3}{\frac{4}{3}\pi r_2^3} = \frac{216}{125}$$

$$\left(\frac{r_1}{r_2}\right)^3 = \left(\frac{6}{5}\right)^3$$

$$\frac{r_1}{r_2} = \frac{6}{5}$$

Now,

$$r_1 + r_2 = 11 \text{ units} = 44 \text{ cm}$$

$$1 \text{ unit} = 4 \text{ cm}$$

$$r_1 = 24 \text{ cm}$$

$$r_2 = 20 \text{ cm}$$

$$\text{Surface area of } A = 4\pi r_1^2 = 4 \times \pi \times (24)^2 = 2304\pi \text{ cm}^2$$

57. (D)
$$\frac{2 \sin 22^\circ}{\cos 68^\circ} - \frac{2 \cot 75^\circ}{5 \tan 15^\circ} - \frac{8 \tan 45^\circ \tan 20^\circ \tan 40^\circ \tan 50^\circ \tan 70^\circ}{5}$$

$$\frac{2 \sin(90^\circ - 68^\circ)}{\cos 68^\circ} - \frac{2 \cot(90^\circ - 15^\circ)}{5 \tan 15^\circ} - \frac{8 \tan 45^\circ \tan 20^\circ \tan 40^\circ \tan 50^\circ \tan 70^\circ}{5}$$

$$= 2 - \frac{2}{5} - \frac{8}{5} \quad (\text{If } A + B = 90^\circ, \text{ then } \tan A \cdot \tan B = 1)$$

$$= \frac{(10 - 2 - 8)}{5} = 0$$

58. (B) Sum of n numbers - $2n = 136$ (i)

Sum of n numbers - $5n = 16$ (ii)

From equations (i) and (ii),

$$3n = 120$$

$$n = 40$$

$$(\text{sum of n numbers}) - 80 = 136$$

$$\text{Sum of n numbers} = 216$$

$$\therefore \text{Average} = \frac{216}{40} = 5.4$$

59. (B) Let the MP = ₹ $100x$

Then, SP at 12% discount = $100x - 12\% \text{ of } 100x = ₹ 88x$

But, He sells to his brother at 15% discount.

So, SP at 15% discount = $100x - 15\% \text{ of } 100x = ₹ 85x$

ATQ,

$$88x - 85x = 72$$

$$x = 24$$

Then, MP = $100x = ₹ 2400$

60. (C) Let the speed of first train be x m/s and second be y m/s.

When they run in same directions : (speeds will be subtracted)

$$x - y = \frac{(120 + 80)}{20}$$

$$x - y = 10 \text{ m/s} \quad \dots\dots\dots(i)$$

When they run in opposite directions : (speeds will be added)

$$x + y = \frac{(120 + 80)}{10}$$

$$x + y = 20 \text{ m/s} \quad \dots\dots\dots(ii)$$

On solving (i) and (ii) we get,

$$x - y + x + y = 10 + 20$$

$$2x = 30$$

$$x = 15 \text{ m/s}$$

Put the value of x in equation (ii),

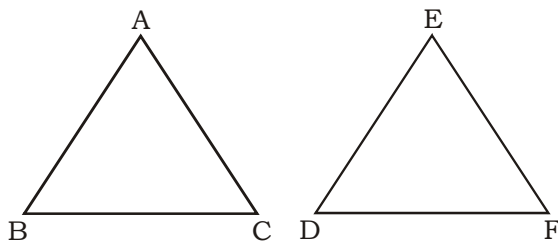
$$x + y = 20$$

$$15 + y = 20$$

$$y = 5 \text{ m/s}$$

∴ Required ratio = 15 : 5 = 3 : 1

61.(A)



Given,

$$\triangle ABC \sim \triangle EDF$$

$$\frac{AB}{ED} = \frac{BC}{DF} = \frac{AC}{EF} \quad (\text{Similar triangle property})$$

$$\frac{\text{ar}(\triangle ABC)}{\text{ar}(\triangle EDF)} = \frac{AB^2}{ED^2} = \frac{AC^2}{EF^2} = \frac{BC^2}{DF^2}$$

$$\frac{9}{4} = \frac{BC^2}{DF^2}$$

$$\frac{3}{2} = \frac{BC}{DF}$$

$$\frac{3}{2} = \frac{8}{DF}$$

$$DF = 8 \times \frac{2}{3}$$

$$\therefore DF = \frac{16}{3}$$

62. (C) Given that the six-digit number $6x2904$ is divisible by 88.

$$88 = 11 \times 8$$

So, the above given number must be divisible by 11.

If we apply divisible rule of 11 here, then resultant of $(4 + 9 + x) - (0 + 2 + 6)$ must be divisible by 11.

$$\text{Resultant} = 5 + X$$

To make $5 + X$ divisible by 11, $X = 6$.

Hence, the digit is 6.

63. (C) $\sec 4\theta = \operatorname{cosec}(\theta + 30^\circ)$

$$\frac{1}{\cos 4\theta} = \frac{1}{\sin(\theta + 30^\circ)}$$

$$\sin(\theta + 30^\circ) = \cos 4\theta$$

$$\sin(\theta + 30^\circ) = \sin(90^\circ - 4\theta)$$

$$\theta + 30^\circ = 90^\circ - 4\theta$$

$$5\theta = 60^\circ$$

$$\therefore \theta = \frac{60^\circ}{5} = 12^\circ$$

64. (B) $\sqrt{x} - \frac{1}{\sqrt{x}} = 6$

Squaring both sides,

$$x + \frac{1}{x} - 2 = 36$$

$$x + \frac{1}{x} = 38$$

$$x^2 + \frac{1}{x^2} + 2 = 1444$$

$$x^2 + \frac{1}{x^2} = 1442$$

65. (C) Option (C) is false because if two triangles are similar, then ratio of its area will be ratio of square of its corresponding sides.

66. (D) $A = \frac{\pi}{2} - B$

taking tan both sides,

$$\tan A = \tan\left(\frac{\pi}{2} - B\right)$$

$$\tan A = \cot B$$

$$\tan A = \frac{1}{\tan B}$$

$$B + C = A$$

taking tan both sides,

$$\tan(B + C) = \tan A$$

$$\frac{\tan B + \tan C}{1 - \tan B \tan C} = \tan A$$

$$\frac{\tan B + \tan C}{1 - \tan B \tan C} = \frac{1}{\tan B}$$

$$\tan^2 B + \tan B \tan C = 1 - \tan B \tan C$$

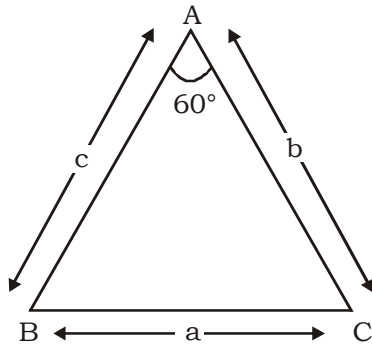
$$\tan^2 B + 2 \tan B \tan C = 1$$

$$\tan B (\tan B + 2 \tan C) = 1$$

$$\tan B + 2 \tan C = \frac{1}{\tan B}$$

$$\therefore \tan A = \tan B + 2 \tan C$$

67. (B)



$$a + b + c = 20$$

$$\text{Area of } \triangle ABC = \frac{1}{2} \times AB \times AC \times \sin A$$

$$10\sqrt{3} = \frac{1}{2} \times c \times b \times \sin 60^\circ$$

$$10\sqrt{3} = \frac{1}{2} \times c \times b \times \frac{\sqrt{3}}{2}$$

$$bc = 40$$

$$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$$

$$\cos 60^\circ = \frac{b^2 + c^2 - a^2}{2bc}$$

$$\frac{1}{2} = \frac{b^2 + c^2 - a^2}{2bc}$$

$$b^2 + c^2 - a^2 = bc$$

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

$$(20 - a)^2 - 3 \times 40 - a^2 = 0$$

$$400 + a^2 - 40a - 120 - a^2 = 0$$

$$40a = 280$$

$$a = \frac{280}{40} = 7$$

$$b + c = 20 - a = 20 - 7 = 13 \quad \dots\dots\dots(i)$$

$$bc = 40$$

$$(b - c)^2 = (b + c)^2 - 4ac$$

$$b - c = \sqrt{(13)^2 - 4 \times 40}$$

$$b - c = 3 \quad \dots\dots\dots(ii)$$

Adding equation (i) and (ii),

$$b + c = 13$$

$$b - c = 3$$

$$\hline 2b = 16$$

$$b = 8$$

$$c = 13 - 8 = 5$$

Hence, sides of triangle are 7 cm, 8 cm and 5 cm.

68. (A) Equal amounts are spent on both types of guavas.
So, the number of first type apple bought in ₹1 = 3
and number of second type of apple bought in ₹1 = 2
If he sells 5 apple in ₹2, so overall he neither gains nor loses.
69. (D) Relative speed = $(50 - 30)$ km/hr = 20 km/hr = $20 \times \frac{5}{18} = \frac{50}{9}$ m/s

∴ Length of train running at 50 km/hr = $\frac{50}{9} \times 18 = 100$ m
70. (D) Required volume = $\pi r^2 h = \frac{22}{7} \times 7 \times 7 \times 0.5 \times 50 = 3850$ cm²
71. (D)
- | Days | Work | Efficiency |
|------------|------|------------|
| A + B → 24 | 120 | 5 |
| B + C → 30 | | 4 |
| C + A → 40 | | 3 |
- Efficiency of A + B + B + C + C + A = 5 + 4 + 3
2(A + B + C) = 12
(A + B + C) = 6
- ∴ Required number of days to complete the work by A, B and C together = $\frac{120}{6}$ days = 20 days
72. (B) Total number of students in Arts stream = 20% of 5000 = 1000

Number of girls student in Arts stream = $\left(\frac{108}{360} \times 1500\right) = 450$

Number of boys student in Arts stream = (1000 - 450) = 550
∴ Required ratio = 550 : 450 = 11 : 9
73. (B) Total number of student in Engineering stream = 30% of 5000 = $\frac{30}{100} \times 5000 = 1500$

Total number of girls student in Engineering stream = $\left(\frac{36}{360} \times 1500\right) = 150$

Total number of boys student in Engineering stream = 1500 - 150 = 1350
∴ Required percentage = $\left(\frac{1350}{1500} \times 100\right)\% = 90\%$
74. (C) Total number of boys student in Management and Science streams together
= $\left(5000 \times \frac{15}{100} - 1500 \times \frac{54}{360}\right) + \left(5000 \times \frac{20}{100} - 1500 \times \frac{90}{360}\right)$
= (750 - 225) + (1000 - 375) = 525 + 625 = 1150
Total number of boys student in Commerce and Engineering streams together
= $\left(5000 \times \frac{15}{100} - 1500 \times \frac{72}{360}\right) + \left(5000 \times \frac{30}{100} - 1500 \times \frac{36}{360}\right)$

$$= (750 - 300) + (1500 - 150) = (450 + 1350) = 1800$$

$$\therefore \text{Required less \%} = \left(\frac{1800 - 1150}{1800} \times 100 \right) \% = \left(\frac{650}{1800} \times 100 \right) \% \approx 36\%$$

75. (B) Total number of students in Management and Commerce streams together

$$= 5000 \times \left(\frac{15 + 15}{100} \right) = 1500$$

$$\text{Total number of students in Arts stream} = 5000 \times \frac{20}{100} = 1000$$

$$\text{Value of } x = (1500 - 1000) = 500$$

\therefore x lies between 450 and 550.

MEANINGS IN ALPHABETICAL ORDER

Aggravates	make (a problem, injury, or offense) worse or more serious	भड़काना
Ambitious	having or showing a strong desire and determination to succeed	महत्त्वाकांक्षी
Annoyance	the feeling or state of being annoyed; irritation	चिढ़
Colossus	a statue that is much bigger than life size	प्रकांड व्यक्ति
Congest	crowd (a road or place) so as to hinder or prevent freedom of movement	अत्यधिक काम देना
Grotesque	comically or repulsively ugly or distorted	विचित्र
Harmony	the combination of simultaneously sounded musical notes to produce chords and chord progressions having a pleasing effect	सद्भाव
Insanity	the state of being seriously mentally ill; madness	पागलपन
Intepid	fearless; adventurous (often used for rhetorical or humorous effect)	निडर
Lofty	of imposing height	बुलंद
Lucidity	clarity of expression; intelligibility	स्पष्टता
Mischief	playful misbehavior or troublemaking, especially in children	शरारत
Picaresque	relating to an episodic style of fiction dealing with the adventures of a rough and dishonest but appealing hero	पाखंडी
Picturesque	visually attractive, especially in a quaint or pretty style	सुरम्य
Plaque	an ornamental tablet, typically of metal, porcelain, or wood, that is fixed to a wall or other surface in commemoration of a person or event	फलक
Sanity	the ability to think and behave in a normal and rational manner; sound mental health	मानसिक स्वास्थ्य
Sobriety	the state of being sober	संयम
Strife	angry or bitter disagreement over fundamental issues; conflict	कलह
Tabloid	a newspaper having pages half the size of those of a standard newspaper, typically popular in style and dominated by headlines, photographs, and sensational stories	मुख्तसर

SSC MOCK TEST - 327 (ANSWER KEY)

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