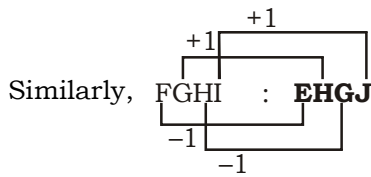
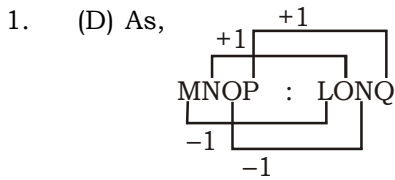
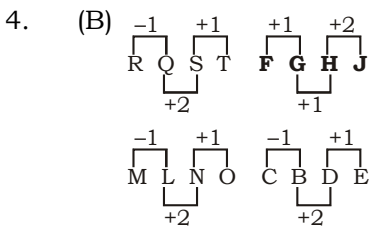


SSC MOCK TEST – 228 (SOLUTION)

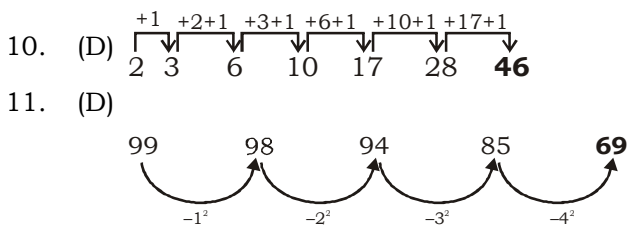


2. (B) As, $41 \Rightarrow 14^2 = 196$
 similarly, $81 \Rightarrow 18^2 = 324$
3. (C) As, 'Happy' and 'Mirthful' are synonyms.
 Similarly, 'Sad' and 'Morose' are synonyms.

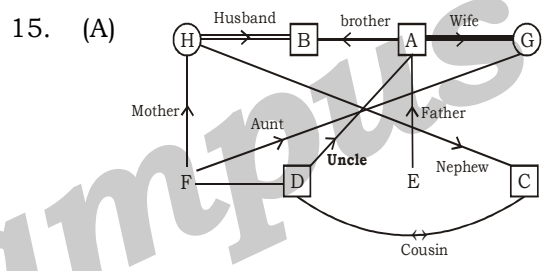


5. (C) Except Tapti, all the rivers flow towards East.
6. (A) $338 = 7^3 - 5$, $217 = 6^3 + 1$
 $28 = 3^3 + 1$, $65 = 4^3 + 1$
7. (B) Student \rightarrow Education \rightarrow Degree
 \rightarrow Interview \rightarrow Job \rightarrow Retirement.

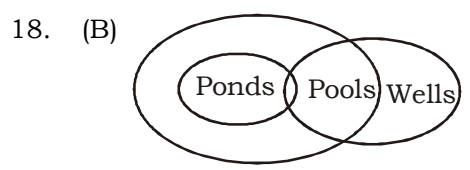
8. (B)
9. (A) $T = H + \frac{2}{11}[30H + \theta]$
 Here $\theta = 0^\circ$, $H = 7$, then
 $\Rightarrow T = 7 + \frac{2}{11}[30 \times 7 + 0] \Rightarrow T = 7 + \frac{420}{11}$
 $\Rightarrow T = 7 + 38 \frac{2}{11} = 7 \text{ past } 38 \frac{2}{11} \text{ min}$



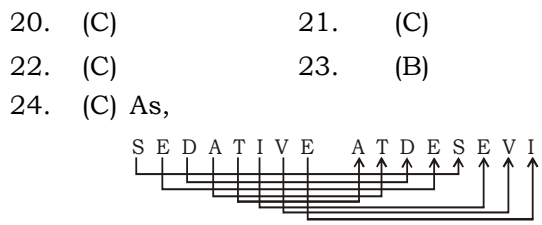
12. (A) As, $26 \times 22 - 22 \times 17 = 198$
 and $17 \times 15 - 12 \times 9 = 147$
 Similarly,
 $14 \times 18 - 19 \times 7 = 119$
 $= 25 + 121 + 529 + 289 - 56$
 $= 908$
13. (C) $dcb/abc/dcb/abc/dcb/abc$
14. (C) Present age of Mitali and Shabnam
 $= 4x : 7x$
 A.T.Q.,
 $(7x + 5) - (4x + 5) = 18$
 $\Rightarrow 3x = 18 \Rightarrow x = 6$
 Now, sum of Mitali and Shabnam age =
 $4x + 7x = 11x = 11 \times 6 = 66$
 Hence sum of age of Mitali and Shabnam
 are 66 years.



16. (A) 32
17. (C) As, 'Study' is related to 'knowledge'.
 Similarly, 'Work' is related to 'experience'.



- I. \times II. \checkmark III. \times
 Hence only conclusion II follows.
19. (A) $\begin{matrix} 2 & 6 & 4 \\ 2 & 5 & 3 \end{matrix}$
 Hence, 3 will be at the top if 4 is at the bottom.



Similarly,



25. (B) ATQ,
 $\Rightarrow 72 \times 9 - 3 \div 8 + 2$
 After changing sign
 $\Rightarrow 72 \div 9 \times 3 + 8 - 2$
 $\Rightarrow 8 \times 3 + 8 - 2$
 $\Rightarrow 24 + 8 - 2$
 $\Rightarrow 30$
27. (D) Certiorari -A writ or order by which a higher court reviews a case tried in lower court.
 Mandamus- a judicial writ issued as a command to an inferior court or ordering a person to perform a public or statutory duty.
 Prohibition means that the Supreme Court and High Court may prohibit the lower courts such as a special tribunals, magistrates commissions, and other judiciary officers who are doing something which exceeds their jurisdiction.
28. (D) A Photometer is an instrument that measures the strength of electromagnetic radiation.
 A Pyrometer is a type of remote-sensing thermometer used to measure the temperature of a surface.
 A Psychrometer, or a wet and dry-bulb thermometer, is commonly used in meteorology, and in the HVAC industry for proper refrigerant charging of residential and commercial air conditioning systems.
30. (C) **Inventor** **Invention**
 A.H. Taylor Radar
 W.K. Roantgen X-Rays
 Fred Morrission Frissbe
34. (D) Founders- P. Sundarayya, E.M.S. Namboodiribad, Harkishan Singh, A.Kk. Gopalan, Promode Dasgupta, B.T. Ramadive, Jyoti Basu and P.R. Ramamurti.
36. (A) Maharani Ahilyabai Holkar was the Holkar Queen of the Maratha Malwa kingdom. She moved the capital to

- Maheshwar south of Indore on the Narmada River.
37. (B) Protoxylem : the first-formed xylem developing from procambium and consisting of narrow cells with annular, spiral, or scalariform wall thickenings.
 Xylem Parenchyma : living plant cells that are short, lignified and generally thin walled. They surround conducting elements and assist directly or indirectly in the conduction of water upwards through vessels and tracheids, and also serve for food storage.
 The Xylem Fibers are non-living sclerenchyma cells as they lose their protoplast at maturity. These cells are found in between the tracheids and xylem vessels of the xylem tissue.
39. (B) Vocal cords, are located within the larynx (also colloquially known as the voice box) at the top of the trachea. When closed, the vocal folds may vibrate and modulate the expelled airflow from the lungs to produce speech and singing.
40. (A) The author of the book Missile Gap - Charles Stross
42. (B) Annelida known as the ringed worms or segmented worms, are a large phylum, with over 22,000 extant species including rag worms, earthworms, and leeches.
 Bilateral symmetry refers to organisms with body shapes that are mirror images along a midline called the sagittal plane. Eg. - flatworms, common worms, clams, snails, octopuses, crustaceans, insects, spiders, brachiopods, sea stars, sea urchins, and vertebrates.
 The Platyhelminthes are acoelomate flatworms, with no specialized circulatory or respiratory organs and a single opening into the digestive cavity. Platyhelminth parasites of reptiles are found in the Trematoda, Cestoda, and Monogenea.
44. (B) The Mandal Commission was established in India on 1 January 1979 with a mandate to "identify the socially or educationally backward classes" of India.
 Nanavati commission was headed by Justice G.T. Nanavati, appointed by the

National Democratic Alliance (NDA) government in May 2000, to investigate the "killing of innocent Sikhs" during the 1984 anti-Sikh riots. The report in two volumes was completed in February 2005. National Education Commission (1964-1966), popularly known as Kothari Commission, was set up to examine all aspects of the educational sector in India, to evolve a general pattern of education and to advise guidelines and policies for the development of education in India. It was formed on 14 July 1964 under the chairmanship of Daulat Singh Kothari, then chairman of the University Grants Commission.

45. (A) Biosphere - the regions of the surface and atmosphere of the earth or another planet occupied by living organisms. The Mesosphere is the third layer of the atmosphere, directly above the stratosphere and directly below the thermosphere.

Asthenosphere - the upper layer of the earth's mantle, below the lithosphere, in which there is relatively low resistance to plastic flow and convection is thought to occur.

48. (A) CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora, also known as the Washington Convention) was signed on 3 March 1973.

51. (B) **Trick:-**

$$SP = \frac{\text{More or Low rate}(100 + \text{gain})}{(\text{gain} + \text{loss})}$$

$$SP = ₹ \frac{92.50 \times 112}{(10.5 + 8)}$$

$$SP = ₹ 560$$

52. (B) Given:-

Principal amount = ₹ 15,000

Rate = 16%

$$\text{C.I of 1}^{\text{st}} \text{ year} = \frac{P \times R \times T}{100}$$

$$= \frac{15000 \times 16 \times 1}{100} = ₹ 2400$$

Amount after 1st year

$$= 15000 + 2400 = ₹ 17,400$$

$$\text{C.I of 2nd year} = \frac{17400 \times 16 \times 1}{100}$$

$$= ₹ 2784$$

Amount after 2nd year

$$= 17400 + 2784 = ₹ 20184$$

$$\text{C.I of 3rd year} = \frac{20184 \times 16 \times 1}{100}$$

$$= ₹ 3229.44$$

Amount of after 3rd year

$$= 20184 + 3229.44 = ₹ 23413.44$$

Difference between C.I of 2nd and 3rd year

$$= (3229.44 - 2784) = ₹ 445.44$$

53. (C) $(5 + 3 \div 5 \times 5) \div (3 \div 3 \text{ of } 6)$ of $(4 \times 4 \div 4$ of $4 + 4 \div 4 \times 4)$

$$\Rightarrow (5 + 3) \div (3 \div 18) \text{ of } (4 \times 4 \div 16 + 1 \times 4)$$

$$\Rightarrow 8 \div \left(\frac{1}{6}\right) \text{ of } (1 + 4)$$

$$\Rightarrow 8 \div \left(\frac{5}{6}\right) = \frac{48}{5} = 9\frac{3}{5}$$

54. (A) Let the average of 11th and 13th number be 'x'.

ATQ,

$$x + x - 6 + x = 80 \times 3 + 15$$

$$\Rightarrow 3x - 6 = 255$$

$$\Rightarrow 3x = 261$$

$$\Rightarrow x = 87$$

Hence average of 11 and 13 number be 87.

55. (A) Efficiency of A : B : C = 5 : 3 : 8

$$\text{Total work} = 30 \times (5 + 3 + 8)$$

$$= 30 \times 16 = 480$$

Work done by A and B in 20 days = $20 \times (5 + 3) = 160$

Remaining work = $480 - 160 = 320$

Remaining work done by C

$$= \frac{320}{8} = 40 \text{ days}$$

56. (A) $\frac{\cos^2 \theta}{\cot^2 \theta - \cos^2 \theta} = 3 \quad 0^\circ < \theta < 90^\circ$

$$\Rightarrow \frac{\cos^2 \theta}{\frac{\cos^2 \theta}{\sin^2 \theta} - \cos^2 \theta} = 3$$

$$\Rightarrow \frac{\sin^2 \theta}{1 - \sin^2 \theta} = 3 \Rightarrow \frac{\sin^2 \theta}{\cos^2 \theta} = 3$$

$$\Rightarrow \tan^2 \theta = 3$$

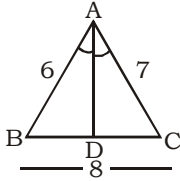
$$\Rightarrow \tan \theta = \sqrt{3} \Rightarrow \theta = 60^\circ$$

Now, $\cot \theta + \operatorname{cosec} \theta$

$$\Rightarrow \cot 60^\circ + \operatorname{cosec} 60^\circ$$

$$\Rightarrow \frac{1}{\sqrt{3}} + \frac{2}{\sqrt{3}} = \frac{3}{\sqrt{3}} = \sqrt{3}$$

57. (C)



Let $BD = x$
 then, $CD = 8 - x$

AD bisects $\angle A$, then

$$\frac{AB}{BD} = \frac{AC}{CD} \Rightarrow \frac{6}{x} = \frac{7}{8-x}$$

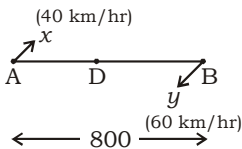
$$\Rightarrow 48 - 6x = 7x$$

$$\Rightarrow 13x = 48 \Rightarrow x = \frac{48}{13}$$

\therefore Length of the short segment

$$= \frac{48}{13} \text{ cm}$$

58. (B)



Let x and y cross each other at D.

Let, $AD = x$, $BD = 800 - x$

ATQ,

$$\frac{x}{40} = \frac{800 - x}{60} \Rightarrow \frac{x}{2} = \frac{800 - x}{3}$$

$$\Rightarrow 3x = 1600 - 2x$$

$$\Rightarrow 5x = 1600 \Rightarrow x = 320$$

\therefore They cross each other at a distance of 320 km from A.

59. (D) $3\sqrt{3}x^3 - 2\sqrt{2}y^3 = (\sqrt{3}x - \sqrt{2}y)(Ax^2 + By^2 + Cxy)$

$$\Rightarrow [(\sqrt{3}x)^3 - (\sqrt{2}y)^3]$$

$$= (\sqrt{3}x - \sqrt{2}y)(Ax^2 + By^2 + Cxy)$$

$$= (\sqrt{3}x - \sqrt{2}y)[(\sqrt{3}x)^2 + (\sqrt{2}y)^2 + \sqrt{3}x \times \sqrt{2}y]$$

$$= (\sqrt{3}x - \sqrt{2}y)(Ax^2 + By^2 + Cxy)$$

$$\Rightarrow (3x^2 + 2y^2 + \sqrt{6}xy) = Ax^2 + By^2 + Cxy$$

On comparing

$$A = 3, B = 2, C = \sqrt{6}$$

$$\text{Now, } (A \times B) \div C \Rightarrow (3 \times 2) \div \sqrt{6}$$

$$\Rightarrow 6 - \sqrt{6} = \sqrt{6}$$

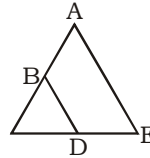
60. (A)

Income	Savings	Expenditure
100	15	85
	↓ 60% increase	↓ 20% increase
126	24	102

Income increased

$$= \frac{126 - 100}{100} \times 100 = 26\%$$

61. (A)



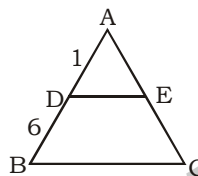
$$BD \parallel AE \text{ and } AE = \frac{8}{3}BD$$

$$\text{Now, } \left(\frac{BD}{AE}\right)^2 = \frac{\text{ar}(BDC)}{\text{ar}(AEC)}$$

$$\Rightarrow \left(\frac{3}{8}\right)^2 = \frac{\text{ar}(BDC)}{\text{ar}(AEC)} \Rightarrow \frac{\text{ar}(BDC)}{\text{ar}(AEC)} = \frac{9}{64}$$

The required ratio = 9 : 64

62. (B)



Given that $AD : DB = 1 : 6$

$$\Rightarrow AD : AB = 1 : 7$$

$$\text{Now, } \frac{\text{ar}(\triangle ADE)}{\text{ar}(\triangle ABC)} = \left(\frac{AD}{AB}\right)^2$$

$$\Rightarrow \frac{\text{ar}(\triangle ADE)}{\text{ar}(\triangle ABC)} = \left(\frac{1}{7}\right)^2$$

$$\Rightarrow \frac{\text{ar}(\triangle ADE)}{\text{ar}(\triangle ABC)} = \frac{1}{49}$$

The required ratio = 1 : 49

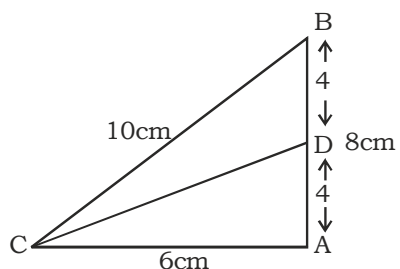
63. (B) A.T.Q,

$$\frac{105}{100} \times \frac{105}{(105+100)} \times x = 35280$$

$$\Rightarrow \frac{21}{20} \times \frac{21}{41} \times x = 35280$$

$$\Rightarrow x = ₹65600$$

64. (A)



In ΔACB

$$CD = \sqrt{6^2 + 4^2}$$

$$CD = \sqrt{36+16} = 2\sqrt{13} \text{ cm}$$

65. (B) $\frac{A}{B} = \frac{80}{100} = \frac{4}{5}, \frac{C}{D} = \frac{120}{100} = \frac{6}{5}$

$$\frac{A}{D} = \frac{100}{75} = \frac{4}{3}$$

B A D C

5 4 \rightarrow 4 \rightarrow 4

4 \leftarrow 4 3 \rightarrow 3

5 \leftarrow 5 \leftarrow 5 6

$$100 : 80 : 60 : 72$$

$$\therefore \frac{B}{C} = \frac{100}{72} \Rightarrow C = 0.72B$$

66. (A) Let speed of a person = x km/hr
 speed of current = y km/hr
 A.T.Q,

$$\frac{4}{x-y} = \frac{80}{60} \Rightarrow x-y = 3 \quad \dots(i)$$

$$\text{and } \frac{4}{x+y} = \frac{24}{60} \Rightarrow x+y = 10 \quad \dots(ii)$$

On solving,

$$x = \frac{13}{2} \text{ and } y = \frac{7}{2}$$

time taken to row 13 km in still water

$$= \frac{13 \times 2}{13} = 2 \text{ hours}$$

67. (C) Let the different positive numbers
 = $a < b < c < d$
 A.T.Q,

$$\frac{1}{3} \times \frac{a+b+c+d}{4} = d-19$$

$$\Rightarrow a+b+c+d = 12d-228$$

$$\Rightarrow a+b+c-11d = -228 \quad \dots(i)$$

$$\text{and } \frac{a+b+c}{3} = 12$$

$$a+b+c = 36 \quad \dots(ii)$$

From eq. (i) and (ii)

$$36-11d = -228 \Rightarrow 11d = 36+228$$

$$\Rightarrow 11d = 264 \Rightarrow d = 24$$

68. (D) $\frac{\tan \theta}{1-\cot \theta} + \frac{\cot \theta}{1-\tan \theta} = 1+k$

Putting $\theta = 30^\circ$

$$\Rightarrow \frac{\tan 30}{1-\cot 30} + \frac{\cot 30}{1-\tan 30} = 1+k$$

$$\Rightarrow \frac{1}{1-\sqrt{3}} + \frac{\sqrt{3}}{1-\frac{1}{\sqrt{3}}} = 1+k$$

$$\Rightarrow \frac{1}{\sqrt{3}(1-\sqrt{3})} + \frac{3}{\sqrt{3}-1} = 1+k$$

$$\Rightarrow k = \frac{4\sqrt{3}-4}{\sqrt{3}(\sqrt{3}-1)} \Rightarrow k = \frac{4}{\sqrt{3}}$$

From option (D)

$$\operatorname{cosec} \theta \cdot \sec \theta \Rightarrow \operatorname{cosec} 30 \cdot \sec 30$$

$$\Rightarrow 2 \times \frac{2}{\sqrt{3}} = \frac{4}{\sqrt{3}}$$

$$\therefore k = \operatorname{cosec} \theta \cdot \sec \theta$$

69. (D) Let C.P = 100, S.P = 120

A.T.Q,

$$M.P = 120 \times \frac{100}{80} \times \frac{100}{93.75}$$

$$M.P = 160$$

$$\text{The required percent} = \frac{160-100}{100} = 60\%$$

70. (D) $r = 27$ cm, $R = 27 + 9 = 36$ cm

$$h = 1 \text{ m} = 100 \text{ m}$$

Volume of cylindrical road roller

$$V = \pi h(R^2 - r^2)$$

$$V = \pi \times 100 (36^2 - 27^2)$$

$$V = 100\pi \times 567 \text{ cm}^3$$

$$V = 56700 \pi \text{ cm}^3$$

$$\text{Weight of the roller} = 8 \times 56700 \pi \text{ gm}$$

$$[\because 1 \text{ cm}^3 = 8 \text{ g}]$$

$$= \frac{8 \times 56700}{1000} \pi \text{ kg} = 453.6 \pi \text{ kg}$$

71. (D) $A : B = 7 : 12, B : C = 8 : 5$

$$A : B : C$$

$$7 : 12 \rightarrow 12$$

$$\frac{8}{8} \leftarrow 8 : 5$$

$$\frac{56}{56} : \frac{96}{56} : \frac{60}{56}$$

$$14 : 24 : 15$$

ATQ.,

$$(15-14) \text{ units} = 214$$

$$1 \text{ unit} = 214$$

$$\therefore x = (14+24+15) \times 214$$

$$x = 53 \times 214 = 11342$$

72. (A) The required central angle of the sector

$$= \frac{55}{300} \times 360 = 66^\circ$$

73. (A) The required percent

$$= \frac{110-59}{110} \times 100 = \frac{51}{110} \times 100$$

$$= 46.4\%$$

74. (C) The required percentage

$$= \frac{65+45}{271+279} \times 100$$

$$= \frac{110}{550} \times 100 = 20\%$$

75. (A) The required ratio

$$= (56+64+45) : (63+57)$$

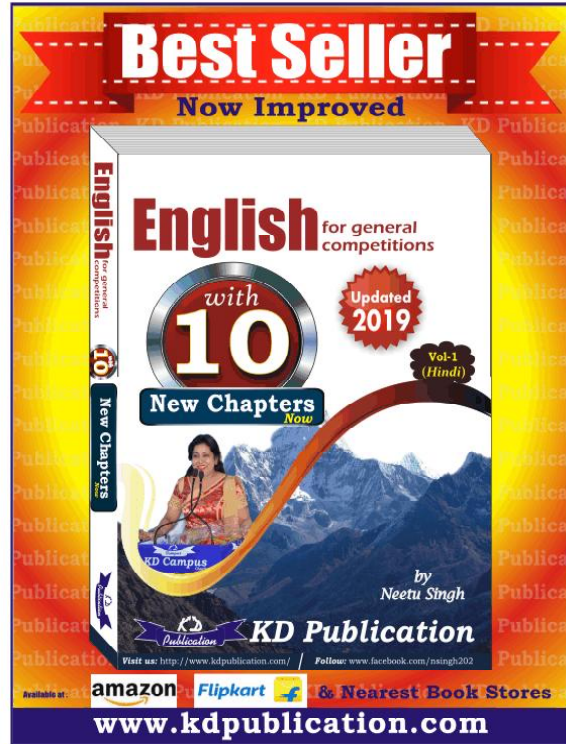
$$= 165 : 120 = 11 : 8$$

MEANINGS IN ALPHABETICAL ORDER

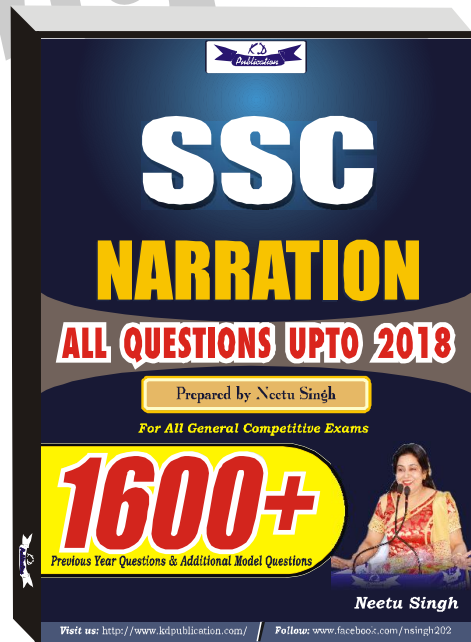
Word	Meaning in English	Meaning in Hindi
Abdicate	to relinquish (something, such as sovereign power) formally	त्यागना
Acronym	A word formed from the initial letters of the several words in the name and pronounced as one word	शब्दों के शुरूआती अक्षर से बना हुआ शब्द
Agitated	feeling or appearing troubled or nervous	उत्तेजित
Agnostic	a person who is unwilling to commit to an opinion about something, one who is not sure about the existence of god	संशयवादी
Ascetic	a person who practices severe self-discipline and abstention	तपस्वी, योगी
Assurance	a positive declaration intended to give confidence; a promise	आश्वासन
Conceal	keep away from sight, hide	छिपाना
Exert	make a physical or mental effort	बल लगाना
Exorbitant	(of a price or amount charged) unreasonably high	अत्यधिक
Fence	surround or protect with a fence	बाड़, घेरा
Holy	dedicated or consecrated to God or a religious purpose; sacred	पवित्र
Humorous	causing lighthearted laughter and amusement; comic	हास्यपूर्ण
Immaculate	(especially of a person or their clothes) perfectly clean, neat, or tidy, flawless	त्रुटि रहित
Impeccable	(of behaviour, performance, or appearance) in accordance with the highest standards of propriety; faultless	त्रुटिहीन
Imperil	put at risk of being harmed, injured, or destroyed	जोखिम
Impoverished	make (a person or area) poor	दरिद्र होना
Inordinate	unusually or disproportionately large, excessive	अत्यधिक
Jeopardize	put (someone or something) into a situation in which there is a danger of loss, harm, or failure	जोखिम में डालना
Mischievous	able or tending to cause annoyance, trouble, or minor injury	नुकसान पहुंचाने वाला शरारतीपूर्ण
Mysterious	difficult or impossible to understand, explain, or identify	रहस्यमय
Pedant	a person who is excessively concerned with minor details and rules or with displaying academic learning	ज्ञान का प्रदर्शन करने वाला
Pseudonym	a fictitious name, especially one used by an author	उपनाम
Ridiculous	deserving or inviting derision or mockery; absurd	बेहूदा
Sacred	dedicated or set apart for the service or worship of a deity	धार्मिक

SSC MOCK TEST - 228 (ANSWER KEY)

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



76. (B) Replace 'to whom' with 'with whom'. He make appointment with someone.
77. (B) Use 'was' instead of 'were' because every is singular.
78. (B) Change 'since' into 'for'. 'One week' is a duration and will take 'for'.



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