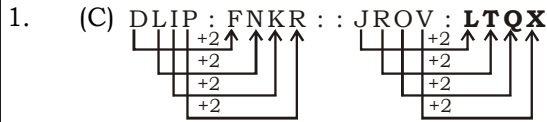
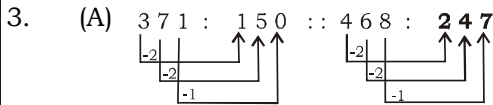


**SSC MOCK TEST - 281 (SOLUTION)**



2. (D) First leads to the second.



4. (C) Cylinder is three dimensional figure, while all others are two dimensional figures.

5. (C) Except (D), the sum of the first three digits of the number gives fourth digit in the number.

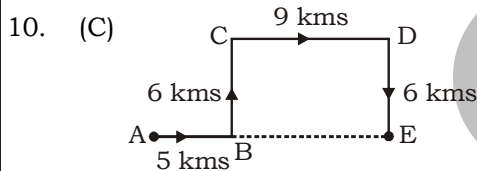
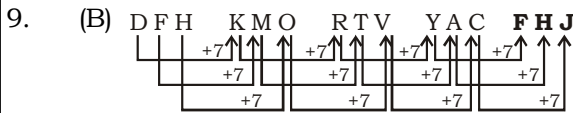
6. (C) Except TXPH, there is a vowel in rest of the options.

7. (B) 

<u>Cardinal</u>	<u>Caricature</u>	<u>Carnivore</u>	<u>Cartoon</u>	<u>Category</u>
2	1	3	4	5

8. (A) 

3	12	27	48	75	108	<b>147</b>
↓	↓	↓	↓	↓	↓	↓
$3 \times 1^2$	$3 \times 2^2$	$3 \times 3^2$	$3 \times 4^2$	$3 \times 5^2$	$3 \times 6^2$	$3 \times 7^2$



Required distance = AE = AB + BE (BE = CD)  
= 5 + 9 = 14 kms

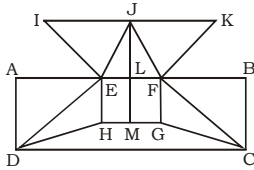
11. (C) From the given dice, we can conclude that 6, 4, 1 and 2 dots appear adjacent to 3 dots. Clearly, there will be 5 dots on the face opposite the face with 3 dots.

12. (A)  $2 \times 9 + 3 \times 17 = 18 + 51 = 69$   
 $2 \times 13 + 3 \times 11 = 26 + 33 = 59$   
Then,  $2 \times ? + 3 \times 13 = 49$   
 $2 \times ? = 10$   
 $? = 5$

13. (B)  $(7 \times 3) = 21$  and  $(9 \times 3) = 27$   
and  $(4 \times 9) = 36$  and  $(2 \times 9) = 18$   
Therefore,  
 $(9 \times 6) = 54$  and  $(4 \times 6) = 24$

14. (B) Sachin himself is the only child of his father.  
So, Sachin's wife is Priya's mother.

15. (B) The given below figure is:



Horizontal lines are IK, AB, HG and DC i.e. 4 in number.

Vertical lines are AD, EH, JM, FG and BC i.e. 5 in number.

Slanting line are IE, JE, JF, KF, DE, DH, FC and GC i.e. 8 in number.

Thus, there are  $4 + 5 + 8 = 17$  straight lines in the given figure.

16. (B)

All the thieves are criminals, while judge is different from these.

17. (D)
- |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| M                    | S                    | D                    | O                    | M                    | G                    | B                    | A                    | N                    | J                    | O                    |
| ↓                    | ↓                    | ↓                    | ↓                    | ↓                    | ↓                    | ↓                    | ↓                    | ↓                    | ↓                    | ↓                    |
| 13                   | 19                   | 4                    | 15                   | 13                   | 7                    | 2                    | 1                    | 14                   | 10                   | 15                   |
| $\times \frac{2}{2}$ | $\times \frac{2}{2}$ | $\times \frac{2}{2}$ | $\times \frac{2}{2}$ | $\times \frac{2}{2}$ | $\times \frac{2}{2}$ | $\times \frac{2}{2}$ | $\times \frac{2}{2}$ | $\times \frac{2}{2}$ | $\times \frac{2}{2}$ | $\times \frac{2}{2}$ |
| 26                   | 38                   | 08                   | 30                   | 26                   | 14                   | <b>04</b>            | <b>02</b>            | <b>28</b>            | <b>20</b>            | <b>30</b>            |

18. (C) 29 February means it is a leap year and in a leap year the month February and August month have the same calendar.

So, on 29<sup>th</sup> August, it is Monday.

19. (C) There is no 'O' letter in the keyword.

20. (A) **C** > A > B > D > E

21. (A) As,  $3 \times 4 \times 5 \Rightarrow 435$ ,

a b c bac

$4 \times 3 \times 2 \Rightarrow 342$

a b c bac

Similarly,

$2 \times 3 \times 4 \Rightarrow$  **324**

a b c **bac**

22. (D)                      23. (D)                      24. (C)

25. (B) 59 77 85 43

N I L E

26. (B) Monopoly is a market form in which the market is dominated by a single seller for goods and services which has no substitutes and there are barriers for entry of a new seller as he himself is the law and price maker.

27. (B) In boxing, bleeder means "a boxer who gets cut easily" or "A fighter who is vulnerable to cuts".

28. (A) **Herpetology:** It is the branch concerned with the study of amphibians.

**Ethology:** It is the science of animal behaviour.

**Mammology:** It is Specialised science that deals with the study of mammals.

**Morphology:** It is The study of forms of things.

30. (C) Isohyets lines are imaginary lines joining places with same level of rainfalls. Isohyets is derived from the Greek word where hyets means Rainfall.
31. (D) A person can be elected as the president of India any number of time as reflected in Article 57. However, for person to be keep on getting elected, they must satisfy the eligibility condition as listed in the Article 58 of the Indian constitution.
33. (A) Takshashila University was located between rivers Indus and Jhelum. It is an ancient city known for Buddhist learning centre located in Rawalpindi, Northwestern Pakistan. It is a UNESCO world heritage site.
34. (D) The Council of Scientific and Industrial Research (CSIR) has signed an MoU with the Union Territory of Ladakh.
37. (A) China is the largest producer of wheat with annual production of 134,340,630 te in world and it is followed by India.
38. (A) Unicellular Organism reproduce through cell division done through mitosis which is also known as asexual reproduction. Examples are all prokaryotes like amoeba, yeast.
40. (B) Venus is also known as Earth's twin because both planets share a similar size, mass and surface composition like silica rock, nickel, thin crust and have an atmosphere with a complex weather system. Further Venus and Earth are neighbor planets thus they came to be known as twins.
42. (D) TV remote control works on the principle of Infrared Technology.
43. (A) Delhi first became the capital of a kingdom under the Tomara Rajputs. Tomar Rajput ruled parts of Haryana and Delhi during the 9th to 12th century.
44. (B) The Chairperson of HCL Technologies Roshni Nadar is listed to be wealthiest woman of India in the year 2020.
45. (B) Hemoglobin is an important component of red blood cells. It consists of amino acids and iron due to which it is red in colour.
46. (A) It is Sodium hydroxide which is present in Soap. It is also known as Caustic soda and is an inorganic compound. Apart from Soap it is also used in the manufacture of pulp and paper, textiles, drinking water and detergents.
49. (D) Kelvin (K) is the unit of measurement of Temperature. The absolute zero of kelvin scale is the temperature at which all thermal motion ceases in the classical description of thermodynamics.
50. (A) Babur was the first Mughal emperor In Indian. Babur entered India in 1526 and defeated Ibrahim Lodi at the First Battle of Panipat in 1526. Babur defeated Rana Sanga in Battle of Khanwa in 1527 and finally established Mughal Dynasty on Delhi Throne.
51. (A) At 450 gram per man per day the provision is for 16 weeks for 220 men  
 1 gram per man per day provision is for 1 week =  $220 \times 450 \times 16$   
 330 gram per man per day the provision is for 24 weeks =  $\frac{220 \times 450 \times 16}{330 \times 24} = 200$   
 Number of men to go out =  $220 - 200 = 20$
52. (A) Materials, labour and overheads are in ratio = 3 : 4 : 2  
 Material cost = ₹ 33.60  
 Cost of article =  $\frac{33.60}{3} \times 9 = ₹ 100.80$
53. (A) Total distance =  $48 \times 6.5 = 312$  km  
 Now, Time taken to travel 180 km with speed of 48 km/hr.  
 $t_1 = \frac{180}{48} = 3.75$  hour  
 Now, Remaining distance =  $312 - 180 = 132$  km

Time taken to travel 132 km with speed to 33 km/hr

$$t_2 = \frac{132}{33} = 4 \text{ hour}$$

Total time =  $t_1 + t_2 = 3.75 + 4 = 7.75$  hour  
= 7 hour 45 minutes

54. (B) **Using formula :**

$$A = P \left( 1 + \frac{R_1}{100} \right) \left( 1 + \frac{R_2}{100} \right) \left( 1 + \frac{R_3}{100} \right)$$

$$12,243 = P \left( \frac{105}{100} \right) \left( \frac{106}{100} \right) \left( \frac{110}{100} \right)$$

$$P = \frac{12,243 \times 100 \times 100 \times 100}{105 \times 106 \times 110} = ₹ 10,000$$

55. (C)  $\operatorname{cosec} \theta + \cot \theta = 3$  \_\_\_\_\_(i)

we know that,

$$\operatorname{cosec}^2 \theta - \cot^2 \theta = 1$$

$$(\operatorname{cosec} \theta + \cot \theta) (\operatorname{cosec} \theta - \cot \theta) = 1$$

$$\operatorname{cosec} \theta - \cot \theta = \frac{1}{3}$$
 \_\_\_\_\_(ii)

Add (i) and (ii),

$$2 \operatorname{cosec} \theta = 3 + \frac{1}{3}$$

$$\operatorname{cosec} \theta = \frac{10}{3 \times 2} = \frac{5}{3}$$

$$\sin \theta = \frac{3}{5}$$

$$[\text{As } \sin \theta = \frac{1}{\operatorname{cosec} \theta}]$$

56. (A) Speed in m/sec =  $25 \times \frac{5}{18} = \frac{125}{18}$  m/s

$$S = \frac{D}{T} = \frac{L_T + L_P}{18}$$

$$L_T + L_P = \frac{125}{18} \times 18 = 125 \text{ m}$$

57. (B)  $A + C = \frac{22}{37}$  part

$$B = 1 - \frac{22}{37} = \frac{15}{37} \text{ part}$$

$$\text{and } B + C = \frac{21}{37} \text{ part}$$

$$\frac{15}{27} + C = \frac{21}{37}$$

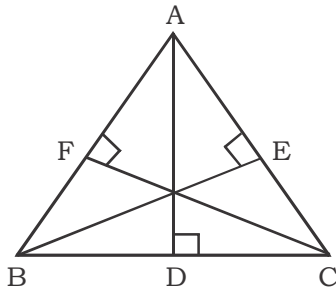
$$C = \frac{21}{37} - \frac{15}{37} = \frac{6}{37} \text{ part}$$

$$\text{So, Wage of C} = \frac{6}{37} \times 9250 = ₹ 1500$$

58. (C) Sum of wrongly entered marks =  $73 + 78 + 80 = 231$   
 and sum of correct marks =  $63 + 70 + 82 = 215$   
 i.e. Sum of corrected marks < sum of wrongly marks (by 16 marks)

$$\text{So, Actual average (after rectification)} = \frac{40 \times 72 - 16}{40} = \frac{2864}{40} = 71.6$$

59. (C)



As we know that  $\Delta ABC$  is an equilateral triangle

$$\text{Height} = \frac{\sqrt{3}}{2} \times \text{side}$$

$$BE = \frac{\sqrt{3}}{2} \times AC$$

Squaring both sides,

$$BE^2 = \frac{3}{4} \times AC^2$$

$$4BE^2 = 3AC^2$$

$$\therefore 3AC^2 = 4BE^2$$

60. (A) Vessel '1'      Vessel '2'  
           Water    Milk      Water    Milk  
           3 : 2        5 : 3

Ratio of contents of vessel '1' to vessel '2' to mix with each other = 1 : 2

$$\text{Ratio of water and milk in the resulting mixture} = \frac{\frac{3}{5} \times 1 \left( \frac{5}{8} \times 2 \right)}{\frac{2}{5} \times 1 \left( \frac{3}{8} \times 2 \right)}$$

$$= \frac{\frac{24 + 50}{40}}{\frac{16 + 30}{40}} = \frac{74}{46} = 37 : 23$$

61. (D) 20% profit on one and 20% loss on other

$$\text{Net loss \%} = \frac{(20)^2}{100} = 4\%$$

Total SP = (100 - 4)% of total C.P.

$$2 \times 4.5 \text{ lakh}$$

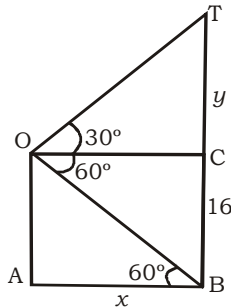
$$= 96\% \text{ of total C.P.}$$

So, loss i.e. 4% of total C.P.

$$= \frac{2 \times 4.5 \text{ lakh}}{96} \times 4 = ₹ 37500$$

Hence, loss of ₹ 37500

62. (B)



In  $\Delta TOC$ ,

$$\tan 30^\circ = \frac{y}{x}$$

$$\frac{1}{\sqrt{3}} = \frac{y}{x}$$

$$x = \sqrt{3}y$$

In  $\Delta AOB$ ,

$$\frac{16}{x} = \tan 60^\circ$$

$$\sqrt{3} = \frac{16}{x}$$

$$16 = \sqrt{3}x$$

$$16 = \sqrt{3} \times \sqrt{3}y \quad (\because x = \sqrt{3}y)$$

$$\frac{16}{3} = y$$

$$y = 5.33$$

So, height of tower = (16 + 5.33) = 21.33 m

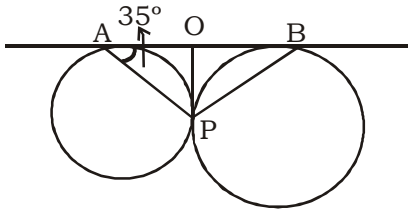
63. (A)  $x = 1 + \sqrt{2} + \sqrt{3}$

$$x - 1 = \sqrt{3} + \sqrt{2}$$

$$\frac{1}{x-1} = \sqrt{3} - \sqrt{2}$$

$$\text{So, } x + \frac{1}{x-1} = 1 + \sqrt{2} + \sqrt{3} + \sqrt{3} - \sqrt{2} = 2\sqrt{3} + 1$$

64. (B)



In  $\triangle AOP$ ,

$$AO = OP$$

$$\angle PAO = \angle APO = 35^\circ$$

$$\angle AOP = 180^\circ - (2 \times 35^\circ) = 110^\circ$$

$$\angle POB = 180^\circ - 110^\circ = 70^\circ$$

In  $\triangle POB$ ,

$$BO = OP$$

$$\angle PBO = \angle OPB = \frac{180^\circ - 70^\circ}{2} = 55^\circ$$

$$\angle ABP = 55^\circ$$

65. (A) 12 km up + 18 km down in 3 hours

36 km up + 54 km down in 9 hours ..... (i)

Also, 36 km up + 24 km down in  $6\frac{1}{2}$  hours ..... (ii)

Equation (i) - (ii), we get,

30 km down in  $2\frac{1}{2}$  hours

$$S_{\text{down}} \text{ (i.e. } S_B + S_C) = 12 \text{ km/hour}$$

$$S_{\text{up}} \text{ (i.e. } S_B + S_C) = 8 \text{ km/hour}$$

$$\text{So, Speed of current} = \frac{S_{\text{down}} - S_{\text{up}}}{2}$$

$$= \frac{12 - 8}{2} \text{ km/hour} = 2 \text{ km/hour}$$

66. (A) Let side of triangle =  $x$  cm

$$\frac{\sqrt{3}}{4}(x+2)^2 - \frac{\sqrt{3}}{4}x^2 = 2\sqrt{3}$$

$$\frac{\sqrt{3}}{4}[x^2 + 4 + 4x - x^2] = 2\sqrt{3}$$

$$4x + 4 = 8$$

$$4x = 4$$

$$x = 1 \text{ cm}$$

67. (A) For mechanic,

$$\text{Purchase price} = 0.9 \times 0.95 \times 2600 = ₹ 2223$$

$$\text{Total cost incurred by mechanic on scooter} = \text{purchase price} + \text{repairing cost} \\ = ₹(2223 + 477) = ₹ 2700$$

$$\text{S.P.} = ₹ 2835$$

$$\text{So, \% profit} = \left( \frac{2835 - 2700}{2700} \times 100 \right) \%$$

$$= \left( \frac{135}{2700} \times 100 \right) \% = 5\% \text{ profit}$$

68. (D)  $CI - SI = P \left[ \frac{r^3}{100^3} + \frac{3r^2}{100^2} \right]$

$$11.40 = P \left[ \frac{125}{1000000} + \frac{3 \times 25}{10000} \right]$$

$$11.40 = P \left[ \frac{125 + 7500}{1000000} \right]$$

$$P = \frac{11.40 \times 1000000}{7625} = ₹ 1495.08$$

69. (D) Part of the tank filled by P in 1 hour =  $\frac{1}{3}$

Similarly, Part of the tank filled by Q in 1 hour =  $\frac{1}{4}$

Part of the tank filled by Q in 2 hours =  $\frac{2}{4} = \frac{1}{2}$

Remaining part of the tank =  $\frac{1}{2}$

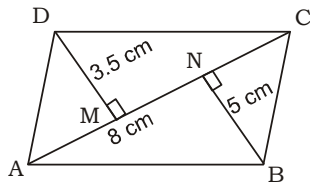
$\frac{1}{3}$  part of the tank is filled by P in 1 hour

1 part of the tank is filled of P in  $\frac{1}{1} \times 3 = 3$  hours

$\therefore \frac{1}{2}$  part of the tank is filled by P in  $3 \times \frac{1}{2} = \frac{3}{2}$  hours = 1 hour and 30 minutes



70. (B)



Area of quad. ABCD = ar ( $\Delta ABC$ ) + ar ( $\Delta ADC$ )

$$= \frac{1}{2} \times 8 \times 5 + \frac{1}{2} \times 8 \times 3.5$$

$$= \frac{1}{2} \times 8 [5 + 3.5]$$

$$= 4 \times 8.5 = 34 \text{ sq. cm.}$$

71. (B) Distance = Difference  $\times \frac{\text{Sum of speed}}{\text{Difference in speed}}$

$$= 165 \times \frac{155}{15} = 1705 \text{ km}$$

72. (C) Required amount =  $(420 - 320) \times 1000$   
 $= 100 \times 1000 = ₹ 100000$

73. (A) Required factor =  $\frac{320}{400} = 0.8$

74. (D) In 1988 =  $\left( \frac{420 - 320}{320} \times 100 \right) \% = 25\%$

In 1989 =  $\left( \frac{420 - 400}{400} \times 100 \right) \% = 5\%$

In 1990 =  $\left( \frac{440 - 420}{420} \times 100 \right) \% = 4.76\%$

$\therefore$  Required year is 1990.

75. (A) Average sales =  $\frac{340 + 320 + 400 + 420 + 440 + 400}{6}$

$$= \frac{2320}{6} = ₹ 386.66 \text{ thousands}$$

Sales are above the average in 1988, 1989, 1990 and 1991 and below the average in 1986 and 1987.

$\therefore$  Required ratio =  $4 : 2 = 2 : 1$

## MEANINGS IN ALPHABETICAL ORDER

Ambitious	having or showing a strong desire and determination to succeed	महत्वाकांक्षी
Amicable	(of relations between people) having a spirit of friendliness; without serious disagreement or rancor	मैत्रीपूर्ण
Barren	(of land) too poor to produce much or any vegetation	बंजर
Capricious	given to sudden and unaccountable changes of mood or behavior	मनमौजी
Complacent	showing smug or uncritical satisfaction with oneself or one's achievements	आत्मसंतुष्ट
Conventional	based on or in accordance with what is generally done or believed	पारंपरिक
Discontent	lack of contentment; dissatisfaction with one's circumstances	असंतोष
Effigy	a sculpture or model of a person	पुतला
Fictitious	not real or true, being imaginary or having been fabricated	काल्पनिक
Futile	incapable of producing any useful result; pointless	व्यर्थ
Gullible	easily persuaded to believe something; credulous	भोला
Highbrow	scholarly or rarefied in taste	घमंडी
Incorrigible	(of a person or their tendencies) not able to be corrected, improved, or reformed	असंशोधनीय
Infallible	incapable of making mistakes or being wrong	अचूक
Meager	(of something provided or available) lacking in quantity or quality	अल्प
Nutritious	nourishing; efficient as food	पौष्टिक
Offbeat	not coinciding with the beat	असामान्य
Scanty	small or insufficient in quantity or amount	अल्प
Smug	having or showing an excessive pride in oneself or one's achievements	आत्मसंतुष्ट
Weird	suggesting something supernatural; uncanny	अजीब

**SSC MOCK TEST - 281 (ANSWER KEY)**

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

76. (B) 'of' replace with 'than'.  
77. (A) 'No' replace with 'any' because. No and failed both are Negative word.  
90. (A) The correct spelling of 'Capritious' is 'Capricious'.  
91. (D) The correct spelling of 'Effecient' is 'Efficient'.