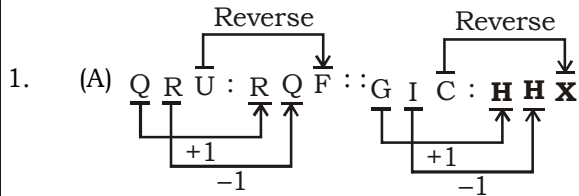


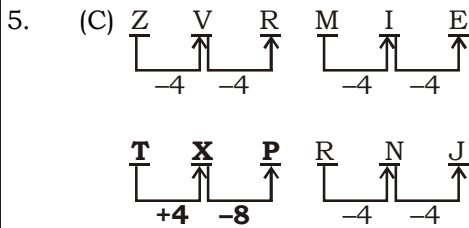
SSC MOCK TEST - 284 (SOLUTION)



2. (A) As,
 $\sqrt[3]{1331} = 11$
 Similarly,
 $\sqrt[3]{13824} = 24$

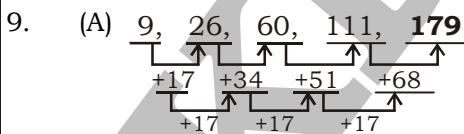
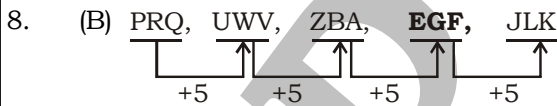
3. (B) As, the opposite of 'Hope' is 'Despair'. Similarly the opposite of 'Lunatic' is 'Sane'.

4. (B)



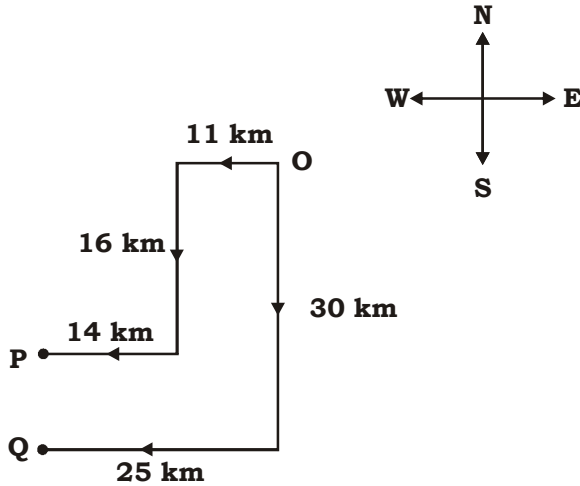
6. (D) $897 \Rightarrow 8 + 9 + 7 = 24$
 $969 \Rightarrow 9 + 6 + 9 = 24$
 $888 \Rightarrow 8 + 8 + 8 = 24$
 $432 \Rightarrow 4 + 3 + 2 \neq 24$

7. (C) 3. Prefer \rightarrow 4. Preformation \rightarrow 2. Preventive \rightarrow 1. Preview



10. (B) $60 \times 5 + 3 \div 24 - 6 = ?$
 Changing signs according to question,
 $60 \div 5 \times 3 - 24 + 6 = ?$
 $12 \times 3 - 24 + 6 = ?$
 $36 - 24 + 6 = ?$
 $42 - 24 = ?$
 $? = 18$

11. (B) Let O be the starting point.



∴ Required distance = $30 - 16 = 14$ km South

12. (B) $36 + 72 = 56 + 52$
 $86 + 59 = 100 + 45$
 $35 + 78 = 100 + 13$

13. (A) $P(16) = F(6) + J(10)$
 $M(13) = C(3) + J(10)$
 $Q(17) = F(6) + K(11)$

14. (A) cdef/fedc/cdef/fedc

15. (C)

16. (B)

17. (D) D U R A D A R S H A N
 $\begin{matrix} -1\downarrow & +1\downarrow & -1\downarrow & +1\downarrow & -1\downarrow & +1\downarrow & -1\downarrow & +1\downarrow & -1\downarrow & +1\downarrow & -1\downarrow \end{matrix}$
 C V Q B C B Q T G B M

Similarly,

T E L E V I S I O N
 $\begin{matrix} -1\downarrow & +1\downarrow & -1\downarrow & +1\downarrow & -1\downarrow & +1\downarrow & -1\downarrow & +1\downarrow & -1\downarrow & +1\downarrow \end{matrix}$
 S F K F U J R J N O

18. (B) a b c d e

$$x + x + 2 + x + 4 + x + 6 + x + 8 = 60$$

$$x + (x + 2) + (x + 4) + (x + 6) + (x + 8) = 60$$

$$5x + 20 = 60$$

$$5x = 60 - 20 = 40$$

$$x = 8$$

The age of C = $x + 4 = 8 + 4 = 12$ years

19. (C) Number of days from 30th June to 15th November = $31 + 31 + 30 + 31 + 15 = 138$

$$\text{Number of odd days} = \frac{138}{7} \Rightarrow 5$$

∴ Required days = Friday + 5 = Wednesday

20. (D) $92 * 24 = 58$

$16 * 56 = 36$

$33 * 49 = 41$

$$\frac{92 + 24}{2} = 58$$

$$\frac{16 + 56}{2} = 36$$

$$\frac{33 + 49}{2} = 41$$

So, $\frac{32 + 84}{2} = \frac{116}{2} = 58$

21. (C)

22. (C)

23. (D)

24. (C)

25. (C)

26. (C) Direct demand- Commodities or services which satisfy our wants directly are said to have direct demand.
27. (C) University Grants Commission was formally established in 1956 by UGC Act.
28. (A) Mithun is a cattle breed is found in Arunanchal Pradesh. Mithun is also known as 'Cattle of Mountain'.
30. (C) Bhutan is also referred as 'Druk Yul' because druk means thunder dragon and the Bhutan flag has a Druk holding jewels to represent wealth of nation hence it is called Druk Yul.
32. (A) A contact force is any force that requires contact to occur. When surfaces in contact move relative to each other, the friction between the two surfaces arises. So, it can be said that contact force is another name for frictional force.
33. (D) Wajid Ali Shah was the tenth and last Nawab of Awadh, holding the position for 9 years, from 13 February 1847 to 11 February 1856.
35. (D) Non-Banking Financial institutions refer to those institutions that doesn't accept chequable deposits nor extend loans to general public. So going by this definition, Bank of India, is not an NBFC, but rather a commercial bank.
36. (B) Kandyan dance is folk dance of Sri Lanka. It is native to Central hills region on Sri Lanka which is known as Udarata.
37. (C) It's in Mitochondria that pyruvic acid is broken down into carbon dioxide, water and energy.
38. (B) In chemistry, neutralization or neutralisation is a chemical reaction in which an acid and a base react quantitatively with each other.
39. (A) Bishnoi is the movement for saving trees. this movement was started by the Environmentalist Amrita Devi and other village men in 1730 to save the villages sacred trees and protect the forest from deforestation.
41. (B) The ozone layer or ozone shield is a region of Earth's stratosphere that absorbs most of the Sun's ultraviolet radiation.
42. (B) Kolkata Port is the oldest operating port in India built by the British East India Company. It was established in 1870. It is a riverine port. In the 19th century, this Port was the premier port in British India.
46. (A) Light year is the measure of distance and not that of time. It actually means the distance which the light can cover in a year. Based on the definition, one light year equals to 95×10^{11} Kilometers.
47. (C) Governor is the constitutional head of each state appointed by the president for a term of 5 years. To become a governor a person should be a citizen of India, be at least 35 years of age, should not be a member of the either house of the parliament or house of the state legislature and he should not hold any other office of profit.

49. (A) In oxidation there is gain of oxygen atoms and loss of hydrogen atoms. Example during rusting iron oxide is converted to iron hydroxide due to gain of oxygen atom.

51. (A) Let the length of train A be $2x$ m.

Length of train A = x m

Relative speed of train A and B = $84 + 78 = 162$ km/hr.

$$= 162 \times \frac{5}{18} = 45 \text{ m/s}$$

ATQ,

$$\frac{2x + x}{45} = 15$$

$$3x = 45 \times 15$$

$$x = \frac{45 \times 15}{3} = 225 \text{ m}$$

\therefore Length of train A = $2x = 2 \times 225 = 450$ m

52. (C) Let the time taken by Q = $3x$ days

Time taken by P = x days

ATQ,

$$\frac{1}{x} + \frac{1}{3x} = \frac{1}{18}$$

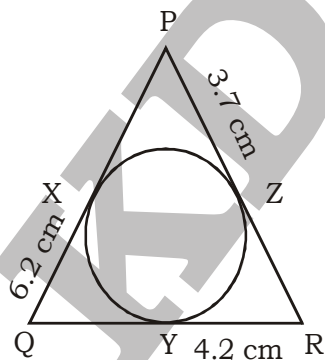
$$\frac{3+1}{3x} = \frac{1}{18}$$

$$3x = 18 \times 4$$

$$x = \frac{18 \times 4}{3} = 24 \text{ days}$$

\therefore Time taken by Q = $24 \times 3 = 72$ days

53. (D)



PZ = XP = 3.7 cm (tangent drawn from an external point P)

RZ = YR = 4.2 cm (tangent drawn from an external point R)

XQ = XP = 6.2 cm (tangent drawn from an external point Q)

\therefore Perimeter of $\Delta PQR = 3.7 + 6.2 + 6.2 + 4.2 + 4.2 + 3.7 = 28.2$ cm

54. (B) There is only one number 4096 from 2000 to 7000, which is both perfect square and perfect cube.

$$(64)^2 = 4096$$

$$(16)^3 = 4096$$

55. (C) Let the speed of the car = x km/h

$$\text{The speed of the train} = x \times \frac{120}{100} = \frac{6x}{5} \text{ km/h}$$

ATQ,

$$t = \frac{180}{x}$$

$$t - \frac{30}{60} = \frac{180 \times 5}{6x}$$

$$\frac{180}{x} - \frac{180 \times 5}{6x} = \frac{1}{2}$$

$$\frac{180}{6x} = \frac{1}{2}$$

$$x = 60 \text{ km/hr}$$

$$\text{Speed of train} = 60 \times \frac{6}{5} = 72 \text{ km/hr}$$

56. (D) $a = 4$ cm, $d_1 = 4$ cm

$$a = \frac{1}{2} \sqrt{d_1^2 + d_2^2}$$

$$4 = \frac{1}{2} \sqrt{(4)^2 + d_2^2}$$

$$8 = \sqrt{16 + d_2^2}$$

$$64 = 16 + d_2^2$$

$$d_2^2 = 48$$

$$d_2 = 4\sqrt{3} \text{ cm}$$

$$\text{Area of equilateral triangle} = \frac{\sqrt{3}}{4} \times (4\sqrt{3})^2 = 12\sqrt{3} \text{ cm}^2$$

57. (A) $\sqrt{\frac{\operatorname{cosec} A}{\operatorname{cosec} A - 1} + \frac{\operatorname{cosec} A}{\operatorname{cosec} A + 1}}$

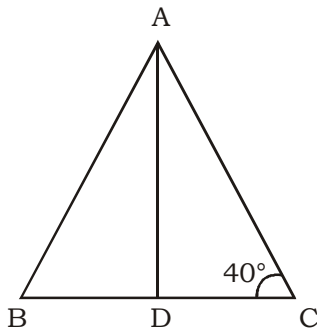
$$= \sqrt{\frac{\operatorname{cosec}^2 A + \operatorname{cosec} A + \operatorname{cosec}^2 A - \operatorname{cosec} A}{\operatorname{cosec}^2 A - 1}}$$

$$= \sqrt{\frac{2 \operatorname{cosec}^2 A}{\cot^2 A}} = \sqrt{2} \times \frac{\operatorname{cosec} A}{\cot A}$$

$$= \sqrt{2} \times \frac{1}{\sin A} \times \frac{\sin A}{\cos A}$$

$$= \sqrt{2} \times \frac{1}{\cos A} = \sqrt{2} \sec A$$

58. (C)



$$AD = \frac{BC}{2}$$

$$AD = BD = DC$$

In $\triangle ADC$,

$$\angle ACD = 40^\circ$$

$$\angle DAC = \angle ADC \{AD = DC\}$$

$$\angle ADB = \angle DAC + \angle ACD = 40^\circ + 40^\circ$$

$$\angle ADB = 80^\circ$$

In $\triangle ABD$,

$$AD = BD$$

$$\angle BAD = \angle ABD$$

$$\angle DAB = \frac{180^\circ - 80^\circ}{2} = 50^\circ$$

59. (A) Total height of Team A = $20(5 \times 12 + 11) = 1420$ inches
 And total height of Team B = $18(6 \times 12 + 2) = 1332$ inches

$$\therefore \text{Overall average height} = \frac{1420 + 1332}{38} = 72.42 \text{ inches}$$

60. (C) Let cost price of transistor = ₹ x
 ATQ,

$$\text{CP of transistor} = x \times \frac{105}{100}$$

$$\text{and SP of transistor} = \left(\frac{115x}{100} + 6 \right)$$

$$\therefore \text{Profit percentage} = \frac{\text{S.P.} - \text{C.P.}}{\text{C.P.}} \times 100$$

$$10 = \frac{\frac{115x}{100} + 6 - \frac{105x}{100}}{\frac{105x}{100}} \times 100$$

$$10 = \frac{(10x + 600)100}{105x}$$

$$105x = 100x + 6000$$

$$5x = 6000$$

$$\therefore x = ₹ 1200$$

61. (D) Let the monthly salary of a man = ₹ x

The annual salary = ₹ $12x$

ATQ,

Annually expenditure of a man = $7 \times 1694.70 + 5 \times 1810.50 = ₹ 20915.40$

His monthly expenditure = $\frac{20915.40}{12} = ₹ 1742.95$

And monthly saving = $\frac{3084.60}{12} = ₹ 257.05$

∴ His monthly salary = $1742.95 + 257.05 = ₹ 2000$

62. (D) Men : Women : Boys = $15 : 24 : 36 = 5 : 8 : 12$

Convert women and boys in terms of men,

8 women = 5 men

12 women = $\frac{5}{8} \times 12 = \frac{15}{2}$ men

12 boys = 5 men

6 boys = $\frac{5}{12} \times 6 = \frac{5}{2}$ men

Total women and boys in terms of men = $\frac{15}{2} + \frac{5}{2} = \frac{20}{2} = 10$ men

Let the number of men required = x

ATQ,

$(x + 10) = \frac{15 \times 12 \times 8 \times 2.25}{30 \times 6} = 18$

$x + 10 = 18$

$x = 8$ men

63. (D) As the sum of money that are to be divided among A, B and C and between E and F are not given. So, the amount that B receive cannot be determined.

64. (D) Volume of the ball = Volume of raised water

$$\frac{4}{3}\pi r^3 = \pi \times (12)^2 \times (6.75)$$

$$r^3 = 729$$

$$r = 9 \text{ cm}$$

65. (C) Let ages of A and B be x and y respectively.

Therefore,

$$x - y = 3 \quad \dots (i)$$

Age of D = $2 \times$ age of A = $2x$

Age of C = $\frac{1}{2}$ age of B = $\frac{1}{2}y$

ATQ,

$$2x - \frac{y}{2} = 30$$

$$4x - y = 60 \quad \dots(ii)$$

Subtracting equation (ii) from equation (i), we get

$$-3x = -57$$

$$x = 19$$

Put the value of x in $x - y = 3$

$$y = 16$$

So, age of A = 19 years and age of B = 16 years

66. (B) Relative speed of man and woman is $(4 + 5) = 9$ miles/h

$$\text{Hence, time required to cover 81 miles} = \frac{81}{9} = 9 \text{ hours}$$

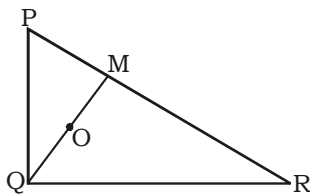
In 9 hours, the women will travel $9 \times 4 = 36$ miles.

67. (D) In the one revolution area covered = Curved surface area

$$2\pi rh = 2 \times \frac{22}{7} \times 120 \times 42 = 31680 \text{ sq. cm.}$$

$$\begin{aligned} \text{In 500 revolutions area covered} &= 31680 \times 500 \\ &= (1584 \times 10^4) \text{ sq. cm} = 1584 \text{ m}^2 \end{aligned}$$

68. (B)



$$PR = \sqrt{PQ^2 + QR^2} = \sqrt{5^2 + 12^2} = 13 \text{ cm}$$

Since O is the centroid, OM is the median and M is the mid point of PR.

$$RM = PM = \frac{13}{2} \quad \left(\because PM = \frac{1}{2} PR \right)$$

Since, centroid divides the median in the ratio of 2 : 1.

$$OQ = \frac{2}{3} QM = \frac{2}{3} \times \frac{13}{2}$$

$$= \frac{13}{3} = 4\frac{1}{3} \text{ cm}$$

69. (C) First term, $G_1 = 1$

$$\text{Common ratio} = \frac{x}{1+x}$$

$$\text{Sum} = S_{\infty} = \frac{G_1}{1-r}$$

$$S_{\infty} = \frac{1}{1 - \frac{x}{1+x}}$$

$$S_{\infty} = 1 + x$$

$$70. \quad (C) \quad \left[\frac{13}{4} \div \left\{ \frac{5}{4} - \frac{1}{2} \left(\frac{5}{2} - \frac{3-2}{12} \right) \right\} \right] = \frac{\left[\frac{13}{4} \div \left\{ \frac{5}{4} - \frac{1}{2} \left(\frac{5}{2} - \frac{1}{12} \right) \right\} \right]}{4 \times \frac{1}{12}} = \frac{1}{\frac{1}{3}}$$

$$= \frac{\left[\frac{13}{4} \div \left\{ \frac{5}{4} - \frac{1}{2} \left(\frac{30-1}{12} \right) \right\} \right]}{\frac{1}{3}} = \frac{\left[\frac{13}{4} \div \left\{ \frac{5}{4} - \frac{29}{24} \right\} \right]}{\frac{1}{3}}$$

$$= \frac{\left[\frac{13}{4} \div \frac{1}{24} \right]}{\frac{1}{3}} = \frac{13}{4} \times 24 \times 3$$

$$= 13 \times 18 = 234$$

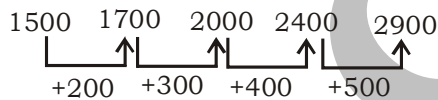
71. (C) Increase in expenditure = $(300 - 150) = ₹ 150$ thousand

$$\text{So, percentage increase} = \left(\frac{150}{150} \times 100 \right) \% = 100\%$$

72. (C) Required percentage = $\left(\frac{1050}{10500} \times 100 \right) \% = 10\%$

73. (B) Expenditure on House Rent is same.

74. (C) The sequence of total expenditure (in thousand rupees) in consecutive years is-



So, The likely expenditure in 2010

$$= (2900+600) \text{ thousand}$$

$$= 3500 \text{ thousand} = ₹ 3500000$$

75. (D) It is clear from the table that the required item is food.

MEANINGS IN ALPHABETICAL ORDER

Affluent	(especially of a group or area) having a great deal of money; wealthy	धनी
Arable	(of land) used or suitable for growing crops	कृषि योग्य
Connoisseur	an expert judge in matters of taste	विशेषज्ञ
Contemporaries	a person or thing living or existing at the same time as another	समकालीन
Convalescent	(of a person) recovering from an illness or operation	जानेवाला
Debonair	confident, stylish, and charming (typically used of a man)	खुशमिजाज
Demagogue	a political leader who seeks support by appealing to the desires and prejudices of ordinary people rather than by using rational argument	दुर्जनों का नेता
Denominator	the number below the line in a common fraction; a divisor	भाजक
Destitute	without the basic necessities of life	निराश्रित
Dilettante	a person who cultivates an area of interest, such as the arts, without real commitment or knowledge	पतला
Feign	pretend to be affected by (a feeling, state, or injury)	बहाना करना
Feint	a deceptive or pretended blow, thrust, or other movement, especially in boxing or fencing	भुलावा
Gnash	grind (one's teeth) together, typically as a sign of anger	दांत पीसना
Inception	the establishment or starting point of an institution or activity	आरंभ
Parity	the state or condition of being equal, especially regarding status or pay	समानता
Pleasant	giving a sense of happy satisfaction or enjoyment	सुखद
Plump	having a full rounded shape	मोटा
Privy	sharing in the knowledge of (something secret or private)	गुप्त
Sprawling	spreading out over a large area in an untidy or irregular way	विशाल
Sprout	(of a plant) put forth shoots	अंकुर
Sterilised	made free from bacteria or other living microorganisms	रोगाणु
Venerable	accorded a great deal of respect, especially because of age, wisdom, or character	सम्मानित

SSC MOCK TEST - 284 (ANSWER KEY)

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

76. (A) Change 'I and Radhika' into 'Radhika and I'. When First Person and Third Person pronouns come in a sentence, Third Person pronoun is followed by First Person pronoun.
77. (C) Replace 'and' by 'but'. 'But for' means 'without'.
86. (B) A conditional sentence takes following form:
 (i) if + sub + had + v₃, sub + would have + v₃ +
- or
- (ii) Had + sub + v₃, sub + would have + v₃ +
87. (D) Since the Reporting verb is in Past Tense, 'would' should be used in Indirect Speech.
90. (B) The correct spelling of 'Convelescent' is 'Convalescent'.
91. (B) The correct spelling of 'Demogogue' is 'Demagogue'.