

UP-VDO MOCK TEST - 8 (SOLUTION)

51. (B) As, D W : F U
 $\begin{array}{c} \downarrow \quad \uparrow \\ +2 \quad -2 \end{array}$

Similarly, J Q : L O
 $\begin{array}{c} \downarrow \quad \uparrow \\ +2 \quad -2 \end{array}$

52. (C) As, FG : 85 → F G
 $6^2 + 7^2 \rightarrow 36 + 49 = 85$

Similarly,
 LO : → L O
 $12^2 + 15^2 \rightarrow 144 + 225 = 369$

53. (A) As, Birds live in nest
 Similarly, Wolves live in **Den**.

54. (B) As, Influenza is caused by virus.
 Similarly, Typhoid is caused by **Bacteria**.

55. (D) As, 358 : 98 → $3^2 + 5^2 + 8^2 = 98$
 Similarly, 739 → $7^2 + 3^2 + 9^2 = 139$

56. (C) As, 12 : 196 → $(12 + 2)^2 = 196$
 Similarly, 28 : → $(28 + 2)^2 = 900$

57. (B) $\frac{1}{2+1^2}, \frac{3}{2+2^2}, \frac{10}{2+3^2}, \frac{29}{2+4^2}, \frac{74}{2+5^2}, \frac{173}{2+6^2}$

58. (D) $\begin{array}{cccccc} 43 & 48 & 63 & 96 & 156 & 253 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ +5 & +15 & +33 & +60 & +97 \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ +10 & +18 & +27 & +37 \\ \downarrow & \downarrow & \downarrow & \downarrow \\ +8 & +9 & +10 \end{array}$

59. (A) $\frac{8}{3^2}, \frac{17}{5^2}, \frac{42}{7^2}, \frac{91}{11^2}, \frac{212}{13^2}, \frac{381}{17^2}$

60. (C) GI, KM, OQ, SU, WY
 $\begin{array}{c} \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \\ +4 \quad +4 \quad +4 \quad +4 \end{array}$

61. (B) A, C, F, J, O, U
 $\begin{array}{c} \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \\ +2 \quad +3 \quad +4 \quad +5 \quad +6 \end{array}$

62. (A) ACD, EGH, IKL, MOP, QST
 $\begin{array}{c} \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \\ +4 \quad +4 \quad +4 \quad +4 \end{array}$

63. (D) G H J M N P
 $\begin{array}{c} \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \\ +1 \quad +2 \quad +1 \quad +2 \end{array}$
 R S U F H I
 $\begin{array}{c} \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \\ +1 \quad +2 \quad +2 \quad +1 \end{array}$

64. (B) 6216 → $6^3 = 216$
7353 → $7^3 \neq 353$
 9729 → $9^3 = 729$
 5125 → $5^3 = 125$

65. (C) Except option 'C', others are prime number.

66. (A) Science Music
 Dance

67. (D) Bus Car
 Brake

∴ Brakes are used in both car and bus

68. (B) Food
 Vegetables
 Patato

69. (A) D O O R → L F I O
 $\begin{array}{c} \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \\ +2 \quad +2 \end{array}$
 opposite alphabets

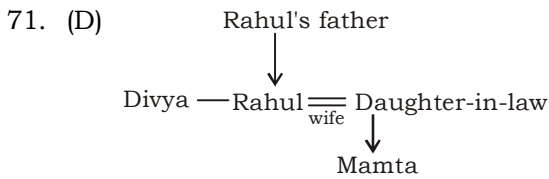
and
 R A N D O M → Z T W P N Q
 $\begin{array}{c} \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \\ +2 \quad +2 \end{array}$
 opposite alphabets

Similarly,
 S U M M E R → F U N O I G
 $\begin{array}{c} \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \\ +2 \quad +2 \end{array}$
 opposite alphabets

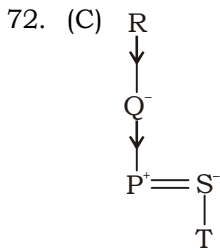
70. (C) As, F R E E → I O H B
 $\begin{array}{c} \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \\ +3 \quad -3 \end{array}$

and M E M O R Y P B P L U V
 $\begin{array}{c} \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \\ +3 \quad -3 \end{array}$

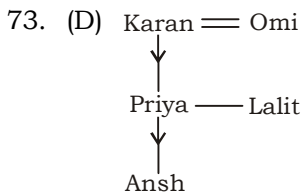
Similarly, P E O P L E S B R M O B
 $\begin{array}{c} \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \quad \downarrow \quad \uparrow \\ +3 \quad -3 \end{array}$



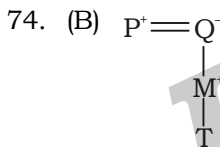
∴ Mamta is 'daughter' of Rahul.



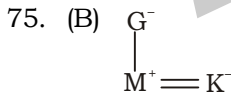
∴ Gender of T can't be determined so, relationship between Q and T cannot be established.



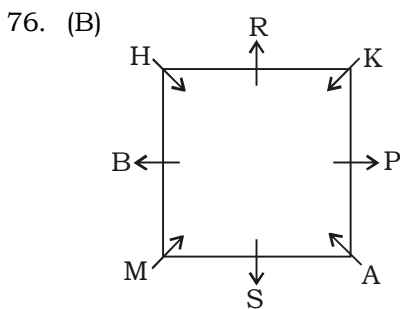
∴ Lalit is **uncle** of Ansh.



∴ P is **paternal grandfather** of T.



∴ K is **daughter-in-law** of G.



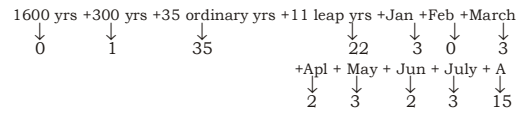
77. (A)

78. (C)

79. (D)

80. (B)

81. (A) First calculate the total number of odd days.



Total odddays = 0 + 1 + 35 + 22 + 3 + 0 + 3 + 2 + 3 + 2 + 3 + 15 = 89 = 84 + 5

∴ There are 5 odd days.

∴ 15th August 1947 was **friday**

82. (B) At 2 o'clock, the hour hand is at 2 and the minute hand is at 12 i.e. they are 10 min spaces apart

To be together, the minute hand must gain 10 minutes over the hour hand.

Now, 55 min are gained by it in 60 min.

∴ 10 minutes will be gained in $\frac{60}{55} \times 10$ min

$$= 10 \frac{10}{11} \text{ min.}$$

∴ The hand will coincide at $10 \frac{10}{11}$ min per 2.

83. (C) Let the number of rows and students in a row be x and y.

Total number of students = xy

Case I

Total students = (x - 1)(y + 3)

$$xy = xy - y + 3x + 3$$

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

Case II

Total students = (x + 2)(y - 3)

$$xy = xy + 2y - 3x - 6$$

$$3x - 2y = -6 \quad \dots(ii)$$

from eq(i) and eq(ii) we get

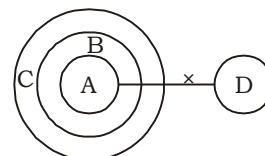
$$x = 4 \text{ and } y = 9$$

∴ Required number of students = 4 × 9 = **36**

84. (C) According to the statement. The campaign did not get any response from citizens. This means that people are not interested in keeping the city clean and the campaign has failed.

∴ Both I and II are implicit

85. (A)



(∴ Only C are B means All B are C)

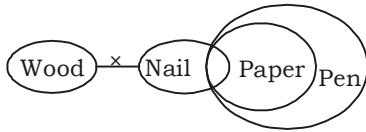
I. False

II. True

III. True

∴ **Conclusion II and III** follow.

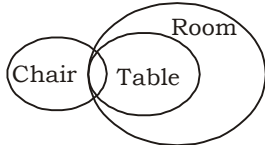
86. (D)



- I. False
- II. True
- III. True

∴ Only **Conclusion II and III** follow.

87. (B)



- I. Can't say
- II. True

∴ Only **conclusion II** follows.

88. (B)

89. (D)

90. (A)

91. (C)

Let ₹1 : 50p : 25P
 Value of coin $x : x : x$
 No. of coins $x : 2x : 4x = 7x$
 A.T.Q.,
 $273 = 7x$
 $x = 39$

Value of all coins = $39 \times 3 = \text{₹}117$

92. (C) Let the three numbers be x, y and z .

A.T.Q., $\frac{x}{7} : \frac{y}{9} : \frac{z}{2}$
 $\frac{9 \rightarrow 2}{14} : \frac{2 \rightarrow 3}{18} : \frac{3}{27}$

let 'k' be the proportionate constant.
 Then, $(14k)(27k) = 648 \dots(\text{given})$

$$\Rightarrow k^2 = \frac{6048}{378} = 16$$

$$\Rightarrow k = 4$$

∴ second number is $18 \times 4 = \text{72}$

93. (C) **28** triangles

94. (A) As, $(3^3 + 9^3) - (5^3 + 4^3) = 569$
 and $(8^3 + 6^3) - (2^3 + 7^3) = 377$

Similarly,
 $(11^3 + 5^3) - (4^3 + 6^3) = \text{1176}$

95. (B) Required age = $(36 + 14 + 1)$ years
 = **51 years**

96. (D) Total number of people in a row
 = $(14 + 12 + 9) - 1 = \text{34}$

97. (C) Required percentage = $\frac{810 - 720}{720} \times 100$
 = **12.5%**

98. (B) Required percentage

$$= \frac{720 + 730 + 740}{770 + 800 + 810} \times 100$$

$$= \frac{2190}{2380} \times 100$$

$$\approx \text{92\%}$$

99. (B) Required percentage = $\frac{740 + 770}{2000} \times 100$

$$= \frac{1510}{20}$$

$$= \text{75.5\%}$$

100. (A) Required difference = $(730 + 770 + 810) - (720 + 740 + 800) = \text{50}$