#### 14 Solved Paper 2014

#### Passage V

Simi was a puppy. She was very cute. Asha found her crying in a park. When she picked her up, the puppy stopped crying and looked at her. Asha liked that glance of her and she decided to take her home. Her mother approved the idea. They together gave her the name 'Simi', and happily brought her home.

So far nobody had trained the puppy, so Asha thought she should train her. Next morning she took Simi out and gave her some lessons. A trainer has to be a bit strict. So she punished her when she disobeyed and rewarded her when she did what Asha wanted her to do. On the whole, the training was not so difficult. In a week's time Simi became a good cultured puppy.

- 96. Asha took the puppy home because she
  - (1) pitied her
- (2) liked her glance
- (3) liked dogs
- (4) needed a puppy
- 97. 'She disobeyed...' 'She' here refers to
  - (1) Asha
- (2) Asha's mother
- (3) the puppy
- (4) the storyteller
- 98. What is the opposite of 'reward'?
  - (1) Encouragement
- (2) Punishment
- (3) Gift
- (4) Scolding

- **99.** The puppy was named Simi by
  - (1) Asha
  - (2) Her mother
  - (3) Asha and her mother
  - (4) A friend of Asha
- 100. Which of the following words does mean "...did what she wanted her to do"?
  - (1) Obeyed
- (2) Performed
- (3) Followed
- (4) Picked

# Answers

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

## Hints and Solutions

- Remaining all figures contains two small figure namely circle (o) and cross (X) and the circle is inside the triangle while cross is outside the triangle.
- Remaining all figures are obtained by rotation either in clockwise or in anti-clockwise direction.
- Remaining all figures contains smaller angle than first one.
- 4. Remaining all flower like figure carries 4 leaves.
- Remaining all figure constitute smaller circle at its middle of the side but in figure which is odd is at its corner.

- Figure number (3), is exactly similar to Problem Figure.
- Figure number (2), is exactly similar to Problem Figure.
- Figure number (4), is exactly similar to Problem Figure.
- Figure number (3), is exactly similar to Problem Figure.
- Figure number (3), is exactly similar to Problem Figure.
- If answer figure (4), would replace the blank space in Problem Figure then Problem Figure would be justified.

- If answer figure (3), would replace the blank space in Problem Figure would be justified.
- If answer figure (2), would replace the blank space in Problem Figure would be justified.
- 14. In the given Problem Figure number of small arc are in increasing mode successively (i.e., 1, 2, 3), then the figure with 4 small arc would replace the blank space of Problem Figure to make justified.
- If answer figure (4), would replace the blank space given in Problem Figure then it would be justified.
- 16. In the given Problem Figure, number of lines are in increasing mode in the smaller circle with single line of increase at a time. Hence, answer figure with four lines inside the smaller circle would replace the Problem Figure.
- Every successive figure, rotate clockwise with angle of 90°. Hence, answer figure (3), would be the best suited choice.
- 18. Every successive figure goes on increasing with three smaller triangles at a time. Hence, the blank space of the Problem Figure would by replace by the figure having a smaller triangle.
- 19. In every successive figure, inner square with one side open rotate through 90° in clockwise direction. Hence, answer figure (2) would replace the blank space of Problem Figure.
- 20. In every successive figure, both the arrows and the smaller designs adjoining by them rotate through 45° in clockwise direction hence, blank space of Problem Figure would be replace by answer figure (3).
- 21. Figure (2) is obtained through the rotation along a side of square likewise answer figure (3) is obtained from Problem Figure (3).
- Likewise circle is connected to all corner of square similarly circle is connected to all vertex of triangle internally.
- Likewise a common tangent drawn in first to obtained second in the same way answer figure (3) is obtained from Problem Figure (3).
- 24. Likewise upper circle has horizontal line and the lower circle has vertical line in the same way answer figure (3) is related to Problem Figure (3).
- 25. As, the car has steering to drive a car in the same way a bicycle has a handle to control or ride.
- 31. Mirror image of K ⇒ X

 $N \Rightarrow N$ 

0 = 0

Hence, answer figure (2) is right.

32. Mirror image of

+ =

• ⇒ •

 $X \Rightarrow X$ 

K ⇒ X R ⇒ R

Hence, answer figure (1) is right.

33. Mirror image of

 $B \Rightarrow B$ ,  $R \Rightarrow R$  and  $4 \Rightarrow 4$ 

Hence, answer figure (3) is right.

- 34. Mirror image of R H S ↔ L H S Hence, answer figure (2) is right.
- 35. Mirror image of

Hence, answer figure (1) is right.

- 51. The number which are not divisible by 2 is called an odd number. Hence, the greatest number that can be formed by 3, 5, 7, 9 and 0 is 97503.
- **52.** Smallest number of five digit = 10000

  Five digit number which is multiplier of 75 is = 10050, 10125, 10200, ... etc.

Hence, the smallest five digit number completely divisible by 75 will be 10050.

53. Oranges sold in Monday = 15 + 15 = 30 Oranges sold in Wednesday

= 15 + 15 + 15 = 45

Oranges sold in Friday

$$= 15 + 15 + 15 + 15 + 15 + 15 = 90$$

Oranges sold in Sunday

$$= 15 + 15 + 15 + 15 = 60$$

Number of oranges sold in four days of week altogether is given by

$$=30+45+90+60=225$$

Now, according to question, oranges to be remain in carton = 25

Hence, total number of oranges = 25 + 225

=250

54. Required number = 280 - 4 = 276 and 1245 - 3 = 1242

HCF of 276 and 1242 = 138

Hence, required number = 138

55. Time to rings the all three bell simultaneously

= LCM of 12, 15, 18 + 9:00 am

= 180 min + 9:00 am

= 3h + 9:00 am = 12:00 pm

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- 56. Sum = 893645 + 635489 = 1529134
  Let the number which is to be subtracted is x, then 1529134 x = 1000000
  ⇒ x = 1529134 1000000 = 529134
- 57. Required length of cloth for a shirt = 2 m 75 cm = (200 + 75) cm = 275 cm Hence, required length of cloth for such six shirt = 275 × 6 = 1650 cm = (1600 + 50) cm = 16 m + 50 cm

= 16 m + 50 cm= 16 m 50 cm

[:: 1 m = 100 cm]

- 58. Smallest number of seven digit = 1000000 Greatest number of six digit = 999999 Required difference = 1000000 - 999999 = 1
- **59.**  $1.01 = \frac{101}{100} = 101\%$
- 60. Weight of water in 25 kg of tomato = 90% of 25 kg = 22.5 kg
- 61. Time = t yr, Principal = ₹ 4250,
  r = 8%

Amounts = ₹ 5610

Amount = Principal + Interest

5610 = 4250 + Interest

Interest = 5610 - 4250 = 1360

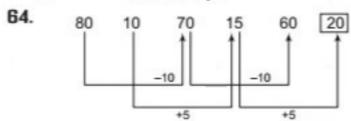
Simple Interest

Time × Principal × Rate of interest

$$\Rightarrow 1360 = \frac{t \times 4250 \times 8}{100}$$

$$\Rightarrow t = \frac{1360 \times 100}{4250 \times 8} = 4$$

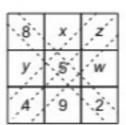
∴ Time = 4 yr



Hence, required unit digit is 0.

**65.** First ten prime numbers are 2, 3, 5, 7, 11, 13, 17, 19, 23, 29 Unit digit in the product of above number will be  $= (2 \times 5) \times \underbrace{(3 \times 7 \times 11) \times (13 \times 17) \times (19 \times 23 \times 29)}_{n \text{ (say)}}$  $= 10 \times n = 0$ 

66.



Sum of diagonal elements = 8 + 5 + 2 = 15

∴ Second diagonal = 
$$4 + 5 + z = 15$$

$$9 + z = 15$$
  
 $z = 15 - 9 = 6$ 

First row  $\Rightarrow 8 + x + z = 15$  8 + x + 6 = 15x = 15 - 14

Third column  $\Rightarrow$  6 + w + 2 = 15

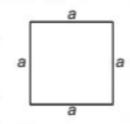
$$w = 15 - 8$$
  
 $w = 7$ 

and second row  $\Rightarrow$  y + 5 + 7 = 15

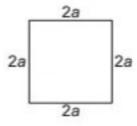
$$y = 15 - 12 = 3$$

Thus,  $x, y, z, w \Rightarrow 1, 3, 6, 7$ 

67.



Perimeter = 4a After doubled the side



Perimeter =  $4 \times 2a = 8a$ 

Hence, resultant perimeter  $8a = 2 \times (4a)$ 

= 2 times × Original perimeter

Thus, the perimeter will be doubled.

**68.** Total distance = 600 m = 0.6 km

Time = 
$$5 \text{ min} = \frac{5}{60} \text{ h}$$

∴ Required speed =  $\frac{\text{Distance}}{\text{Time}} = \frac{0.6/5}{60}$ = 7.2 km/h

**69.** Here 
$$H_1 = 8$$
,  $D_1 = 12$ ,  $M_1 = 1$ ,  $W_1 = 1$ ,

 $H_2 = 6$ ,  $D_2 = ?$ ,  $M_2 = 1$ ,  $W_2 = 1$ 

### Navodaya Vidyalaya (Class VI) Entrance Exam 17

Now, 
$$\frac{M_1D_1H_1}{W_1} = \frac{M_2D_2H_2}{W_2}$$
$$D_2 = \frac{96}{6} \text{ Days} = 16 \text{ Days}$$

**70.** Fraction of drum filled with = 
$$\frac{1}{5}$$

Remaining part = 
$$1 - \frac{1}{5} = \frac{4}{5}$$

According to the question,

$$\frac{4}{5}$$
 part = 28 L  
4 part = 28 × 5 = 140 L  
1 part =  $\frac{140}{4}$  = 35 L

71. 
$$\frac{0.1}{0.01} + \frac{0.01}{0.1} = \frac{100 \times 0.1}{100 \times 0.01} + \frac{0.01 \times 100}{0.1 \times 100}$$
$$= \frac{10}{1} + \frac{1}{10} = \frac{101}{10}$$

72. Let the score of Bhavana be x, then Score of Karan = x + 10 Score of Isha = x - 5 According to question, x + 10 + x - 5 + x = 170

$$3x + 5 = 170$$
$$3x = 165$$
$$x = 55$$

Obtained mark of Isha = 55 - 5 = 50

74. According to question 15% = 171

$$1\% = \frac{171}{15}$$

Hence, 
$$100\% = \frac{171 \times 100}{15} = 1140$$

Hence, total number of ticket = 1140

75. Vandana wants to buy a total 185 bottle of coke so, she will have to pay ₹ 240 for 6 carat (6 × 30 = 180 bottle) and ₹ 10 for each bottle of coke so, the amount paid by Vandana is