Passage 4

The neem tree is known as a village pharmacy due to the medicinal benefits of its seeds, bark and leaves. It is called *arista* in Sanskrit which means perfect, imperishable and complete. Neem oil plays an important role in pest control and can also be used as a replacement for mosquito repellent. Neem seed cakes are used as fertilizer. A paste of neem leaves is used to treat chickenpox. Neem twigs commonly referred to as 'datun' are used as toothbrushes in villages. The bark and roots are also used, in powdered form, to control fleas and ticks on pets.

76. A pharmacy is
(a) farm land (b) a medical store
(c) a playground (d) a farm house

77. The part of the neem tree that is useful to the farmers is
(a) seeds (b) bark (c) twigs (d) leaves

78. Which one of the following is not a synonym of 'perfect'?
(a) faultless (b) flawless
(c) seamless (d) blemished

79. The word 'pest' in the passage means
(a) an insect that destroys crops
(b) an angry person
(c) dirty water
(d) pollution

80. Neem ... are used as toothbrushes in villages.
(a) roots
(b) leaves
(c) twigs
(d) seed cakes

Answers

1	(b)	**2**	(c)	**3**	(d)	**4**	(b)	**5**	(c)	**6**	(c)	**7**	(b)	**8**	(d)	**9**	(a)	**10**	(d)
11	(c)	**12**	(d)	**13**	(b)	**14**	(a)	**15**	(c)	**16**	(d)	**17**	(c)	**18**	(b)	**19**	(d)	**20**	(b)
21	(a)	**22**	(b)	**23**	(a)	**24**	(c)	**25**	(b)	**26**	(c)	**27**	(c)	**28**	(a)	**29**	(c)	**30**	(c)
31	(c)	**32**	(a)	**33**	(c)	**34**	(b)	**35**	(b)	**36**	(a)	**37**	(c)	**38**	(b)	**39**	(b)	**40**	(d)
41	(c)	**42**	(d)	**43**	(d)	**44**	(b)	**45**	(a)	**46**	(b)	**47**	(b)	**48**	(b)	**49**	(d)	**50**	(b)
51	(a)	**52**	(d)	**53**	(b)	**54**	(b)	**55**	(d)	**56**	(c)	**57**	(b)	**58**	(a)	**59**	(a)	**60**	(b)
61	(a)	**62**	(c)	**63**	(b)	**64**	(c)	**65**	(d)	**66**	(b)	**67**	(a)	**68**	(c)	**69**	(a)	**70**	(b)
71	(c)	**72**	(b)	**73**	(c)	**74**	(c)	**75**	(b)	**76**	(b)	**77**	(a)	**78**	(d)	**79**	(a)	**80**	(c)

Hints and Solutions

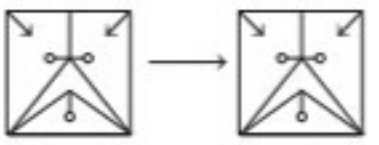
1. (b) Except figure (b), in all other figures the innermost geometrical figure is made up of similar number staight lines as there are circles.
Hence, figure (b) is different.

2. (c) Except figure (c), all other figures consist of three letters R, U and N. But in figure (c), letter 'K' is used in place of 'R'.
Hence, figure (c) is different.

3. (d) Except figure (d), all other figures have only two intersecting circles. But in figure (d), all the three circles are intersecting each other.
Hence, figure (d) is different.

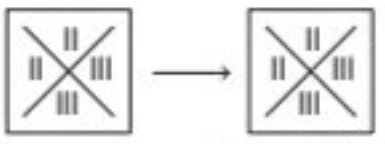
4. (b) Except figure (b), all other figures are same when rotated.

5. (c) Answer figure (c) is similar to the given question figure.



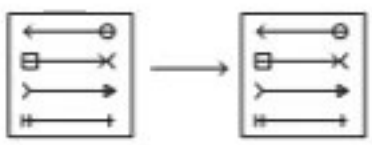
Que. Fig. Answer Fig. (c)

6. (c) Answer figure (c) is similar to the given question figure.



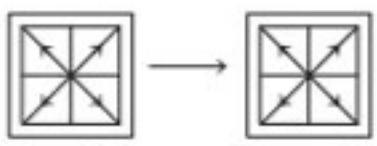
Que. Fig. Answer Fig. (c)

7. (b) Answer figure (b) is similar to the given question figure.



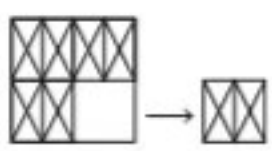
Que. Fig. Answer Fig. (b)

8. (d) Answer figure (d) is similar to the given question figure.

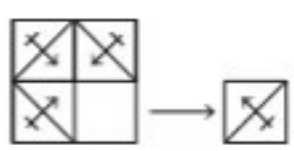


Que. Fig. Answer Fig.

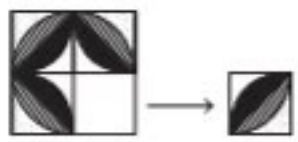
9. (a) Answer figure (a) will complete the given question figure.



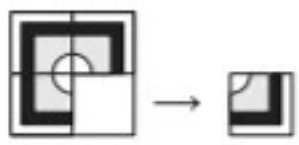
10. (d) Answer figure (d) will complete the given question figure.



11. (c) Answer figure (c) will complete the given question figure.



12. (d) Answer figure (d) will complete the given question figure.



13. (b) The elements are moving from one corner to other in clockwise direction in each step. Hence, answer figure (b) will complete the given series.

14. (a) One half-leaf is added in each step in clockwise direction. Hence, answer figure (a) will complete the given series.

15. (c) The symbols are moving from one side of triangle to other in clockwise direction in each step and the line inside the triangle is same in each alternative figure. Hence, answer figure (c) will complete the series.

16. (d) The symbols are changing their position from one corner to other in anti-clockwise direction in each step. Hence, answer figure (d) will complete the given series.

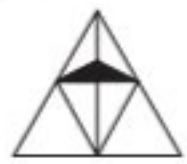
17. (c) The innermost element is enlarged and becomes the outermost element. The outermost element reduces in size and becomes the inner most element. Hence, figure (c) is the correct answer.

18. (b) Second figure is the mirror image of first figure. Hence, answer figure (b) will replace the question mark.

19. (d) From first figure to second figure, whole figure is rotated 90° anti-clockwise. Hence, answer figure (d) is correct choice.

20. (b) From first figure to second the inner element is enlarged. Hence, answer figure (b) is the correct choice.

21. (a) Answer figure (a) will complete the geometrical figure as follows

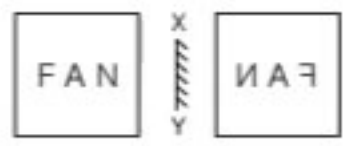


22. (b) Answer figure (b) will complete the geometrical figure as follows

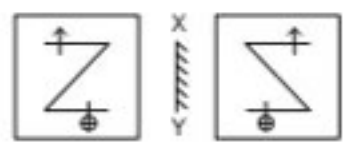
23. (a) Answer figure (a) will complete the geometrical figure as follows

24. (c) Answer figure (c) will complete the geometrical figure as follows

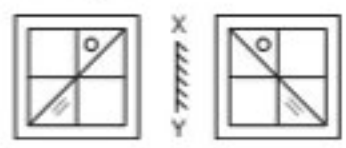
25. (b) Answer figure (b) is the correct mirror image of the given question figure.



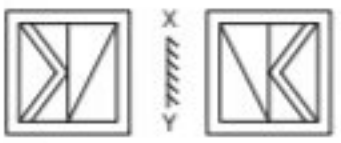
26. (c) Answer figure (c) is the correct mirror image of the given question figure.



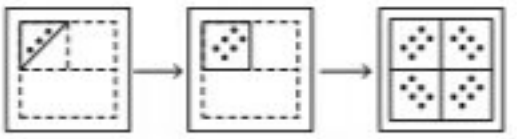
27. (c) Answer figure (c) is the correct mirror image of the given question figure.



28. (a) Answer figure (a) is the correct mirror image of the given question figure.

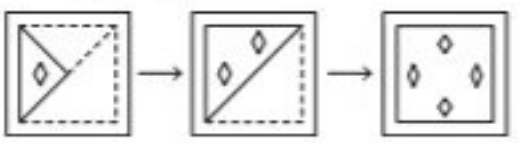


29. (c) When the paper is unfolded, it will appear as shown in answer figure (c).



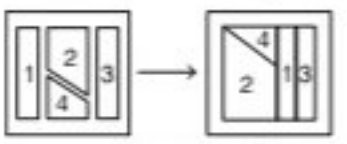
30. (c) When the paper is unfolded, it will appear as shown in answer figure (c).

31. (c) When the paper is unfolded, it will appear as shown in answer figure (c).



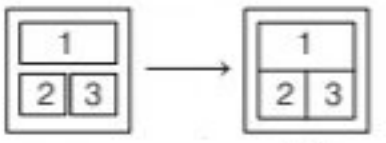
32. (a) When the paper is unfolded, it will appear as shown in answer figure (a).

33. (c) Answer figure (c) can be formed from the cut out pieces given in the question figure.



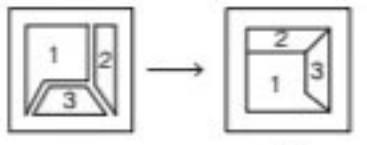
(c)

34. (b) Answer figure (b) can be formed from the cut out pieces given in the question figure.



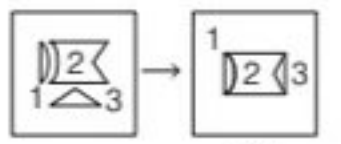
(b)

35. (b) Answer figure (b) can be formed from the cut out pieces given in the question figure.



(b)

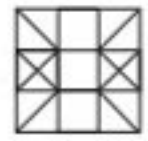
36. (a) Answer figure (a) can be formed from the cut out pieces given in the question figure.



(a)

37. (c) The question figure is embedded in the answer figure (c).

38. (b) The question figure is embedded in the answer figure (b).



39. (b) The question figure is embedded in the answer figure (b).

40. (d) The question figure is embedded in the answer figure (d).

41. (c) Given expression,

$$15\frac{1}{2}-\left[\frac{12}{5}\times\frac{5}{8}+\left(7\div1\frac{3}{4}\right)\right]\times2$$

By applying VBODMAS,

$$=\frac{31}{2}-\left[\frac{12}{5}\times\frac{5}{8}+\left(7\div\frac{7}{4}\right)\right]\times2$$

$$=\frac{31}{2}-\left[\frac{12}{5}\times\frac{5}{8}+\frac{7\times4}{7}\right]\times2=\frac{31}{2}-\left[\frac{3}{2}+4\right]\times2$$

$$=\frac{31}{2}-\left[\frac{11}{2}\right]\times2=\frac{31}{2}-11=\frac{31-22}{2}=\frac{9}{2}$$

42. (d) ∵ LCM of 3 and 5 = 15

The numbers which are multiples of both 3 and 5

= 15 × 1, 15 × 2, 15 × 3, 15 × 4, 15 × 5, 15 × 6

= 15, 30, 45, 60, 75, 90

Total numbers = 6

43. (d) Zero is neither odd nor even number.

44. (b) According to the question, speed = 30 km/h,

$$\text{time}=\left(t+\frac{10}{60}\right)\text{h}=\left(t+\frac{1}{6}\right)\text{h}$$

By using, $\text{Speed}=\frac{\text{Distance}}{\text{Time}}$

Distance $(S) = 30 \times \left(t + \frac{1}{6}\right)$ ...(i)

According to the question,

Speed = 42 km/h

Time $= \left(t - \frac{10}{60}\right)$ h $= \left(t - \frac{1}{6}\right)$ h

$\Rightarrow$ Distance $(S) = 42 \times \left(t - \frac{1}{6}\right)$ ...(ii)

From Eqs. (i) and (ii),

$$\text{Distance } (S) = 30\left(t + \frac{1}{6}\right) = 42 \times \left(t - \frac{1}{6}\right)$$

$$\Rightarrow \quad 5\left(t + \frac{1}{6}\right) = 7\left(t - \frac{1}{6}\right)$$

$$\Rightarrow \quad 5t + \frac{5}{6} = 7t - \frac{7}{6} \Rightarrow \quad 2t = \frac{12}{6}$$

$$\therefore \quad t = 1\,\text{h}$$

Hence, distance $(S) = 30\left(t + \frac{1}{6}\right)$

$$= 30\left(1 + \frac{1}{6}\right) = 30 \times \frac{7}{6} = 35\,\text{km}$$

45. (a) According to the question,

Speed of passenger train = 80 km/h

Time taken by passenger train = 4 h

Let, speed of goods train = v

Time taken by goods train = 6 + 4 = 10 h

$\because$ Distance covered by both the trains is same.

Now, by using, Speed $= \frac{\text{Distance}}{\text{Time}}$

Distance = Speed × Time

Distance = $80 \times 4 = v \times 10 \Rightarrow v = 32$ km/h

46. (b) According to the question,

Amount (A) = ₹ 6600

time (t) = 4 yr

rate (r) = 8%

By using, Simple Interest $= \frac{\text{Principal} \times \text{rate} \times \text{time}}{100}$

$$\text{SI} = \frac{Prt}{100}$$

$$\Rightarrow \quad \text{SI} = \frac{P \times 4 \times 8}{100} \quad \text{...(i)}$$

But, Amount $(A) = P$ + SI

From Eq. (i),

$$A = P + \frac{P \times 4 \times 8}{100}$$

$$\Rightarrow \quad 6600 = P + \frac{8P}{25}$$

$$\Rightarrow \quad 6600 = \frac{33P}{25} \Rightarrow P = 200 \times 25$$

$\therefore \quad P$ = ₹ 5000

47. (b) 1 kg = 1000 gm

Given, 5045 gm = (5000 + 45) gm

This can be written as 5 × 1000 × 45 gm

i.e. 5 kg. 45 gm

48. (b) According to the question,

Size of a rectangular slab = Length × Breadth

= 10 cm × 8 cm

Size of a hall = Length × Breadth = 12 m × 10 m

= 1200 cm × 1000 cm [$\because$ 1 m = 100 cm]

$$\text{Total number of slabs} = \frac{\text{Size of a hall}}{\text{Size of a rectangular slab}}$$

$$= \frac{1200 \times 1000}{10 \times 8} = 15000$$

$\therefore$ Total number of rectangular slabs = 15000

49. (d) Given, 5 84 356

Place values of 5 → [5] 84 3 [5] 6

i.e. 500000 and 50

Sum of place values of 5 = 500000 + 50 = 500050

50. (b) According to the question,

Side of a cube = 10 cm

When, two cubes are joined end to end

Length of a cuboid (l) = 20 cm, breadth (b) = 10 cm,

height (h) = 10 cm

By using, volume of a cuboid = $l \times b \times h$

$= 20 \times 10 \times 10 = 2000\,\text{cm}^3$

51. (a) Given, 150%

150% is written as $\frac{150}{100} = \frac{15}{10} = 1.5$

52. (d) Seller buys 2 lemons in = ₹ 1

Cost price of 1 lemon (CP) $= \frac{1}{2}$ ...(i)

Seller sells 5 lemon in = ₹ 3

Selling price of 1 lemon (SP) $= \frac{3}{5}$ ...(ii)

$$\text{But, profit \%} = \frac{\text{SP} - \text{CP}}{\text{CP}} \times 100 = \frac{\frac{3}{5} - \frac{1}{2}}{\frac{1}{2}} \times 100$$

$$= \frac{\frac{6-5}{10}}{\frac{1}{2}} \times 100 = \frac{2}{10} \times 100 = 20\%$$

53. (b) From the options,

Multiples of 60 = 2 × 2 × 3 × 5 or 4 × 3 × 5 or 6 × 10

Hence, number 60 is divisible by 3, 4, 5 and 6.

54. (b) According to the question,

Total eggs = 500 $\Rightarrow \frac{3}{25}$ got broken

i.e. broken eggs $= \frac{3}{25} \times 500 = 60$

$\therefore$ Remaining eggs $= 500 - 60 = 440$

Now, $\frac{4}{5}$ of the remaining eggs were sold i.e.

$$= \frac{4}{5} \times 440 = 88 \times 4 = 352$$

Hence, number of eggs left $= 500 - (60 + 352)$

$$= 500 - 412 = 88$$

55. (d) According to the question,

$\Rightarrow$ 5 min past 3 in the afternoon is written as 3 : 05 pm.

i.e. 3 hrs 5 minutes in the afternoon.

56. (c) Given digits = 0, 3, 6, 7, 9

Greatest 5-digit number = 97630

Smallest 5-digit number = 30679

$\therefore$The difference between the greatest and the smallest numbers = 97630 – 30679 = 66951

57. (b) According to the question,

When Selling Price (SP_1) = ₹ 500, there is a loss L.

When Selling Price (SP_2) = ₹ 700, there is a profit i.e. 3 times the former loss = $3L$

By using,

$$SP = \left(\frac{100 \pm \text{Profit / Loss}}{100}\right) \times \text{Cost price}$$

$$SP_1 = 500 = \frac{100 - L}{100} \times CP \quad \ldots(i)$$

$$SP_2 = 700 = \frac{100 + 3L}{100} \times CP \quad \ldots(ii)$$

From Eqs. (i) and (ii),

$$\frac{500}{700} = \frac{100 - L}{100 + 3L}$$

$$500 + 15L = 700 - 7L$$

$$22L = 200$$

$$L = \frac{200}{22} = 9.09$$

From Eq. (i),

$$SP_1 = 500 = \frac{100 - 9.09}{100} \times CP$$

$$CP = \frac{500 \times 100}{90.91} = 550$$

Hence, the CP of the article = ₹ 550

58. (b) According to the question,

$\therefore$ Required answer $= (-1) \times (1)^{100} = (-1)^{101} = -1$

59. (a) According to the question,

Given expression $= 2.75 - 1.25 + 4.75 - 3.80$

By BODMAS rule,

$$= 2.75 + 4.75 - 1.25 - 3.80$$

$$= 7.5 - 5.05 = 2.45 = \frac{245}{100} = \frac{49}{20} = 2\frac{9}{20}$$

60. (b) According to the question,

Let breadth of a rectangular plot = B

Length of a rectangular plot (l) = $2B$

$\therefore$ A square swimming pool of side 8 m occupies one-eighth part of the plot.

$\therefore$ Area of swimming pool

$$= \frac{1}{8} \times \text{area of a rectangular plot}$$

$$\text{or } (\text{Side})^2 = \frac{1}{8} \times l \times b$$

$$(8)^2 = \frac{1}{8} \times 2B \times B$$

$$64 = \frac{1}{4} \times B^2$$

$$B^2 = 64 \times 4$$

$$= 256$$

$$B = 16 \text{ m}$$

Hence, length of the plot = $2 \times 16 = 32$ m

61. (a) The Mayans discovered chewing gum.

62. (c) Chicleros are the workers who collect chicle.

63. (b) Slabs of chicle are sent to gum factories.

64. (c) Except to thicken it several ingredients are added to chicle to soften, add flavour and colour to the gum.

65. (d) A suitable title for the passage will be 'The story of Chewing Gum'.

66. (b) Holy places are visited by religious people, sight-seers as well as travellers.

67. (a) 'Generally' means 'usually'. So, 'usually' is the correct synonym of 'generally'.

68. (c) 'Holy' means 'religious', its antonym is 'cursed'.

69. (a) People come to bathe and worship in the Ganga as its water is holy.

70. (b) According to the passage, people go on a pilgrimage because they are religious.

71. (c) Ajit's best birthday gift was a rose sapling.

72. (b) As soon as Ajit woke up, he rushed to see the sapling.

73. (c) Firstly, two rose buds are appeared.

74. (c) Ajit gifted the first two roses to his mother and sister.

75. (b) The word 'thrilled' means excited.

76. (b) A pharmacy is a medical store.

77. (a) The part of the neem tree that is useful to the farmers is its seeds.

78. (d) 'Perfect' means faultless, flawless, seamless etc. Blemished is not a synonym of 'Perfect'.

79. (a) The word 'Pest' in the passage means, an insect that destroys crops.

80. (c) Neem twigs are used as toothbrushes in villages.