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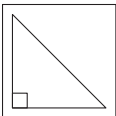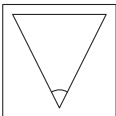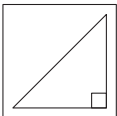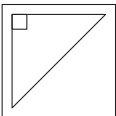
Entrance Exam (Class-VIth)
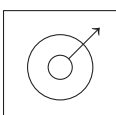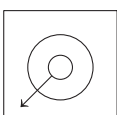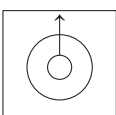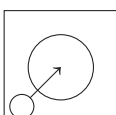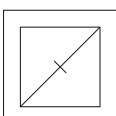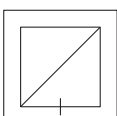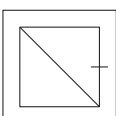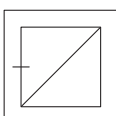
Solved Paper 2020

SECTION I : Mental Ability Test

Part I

Directions *In Question Nos. 1 to 4 four figures (a), (b), (c) and (d) have been given in each question. Of these four figures, three figures are similar in some way and one figure is different. Select the figure which is different. Darken the circle for answer in the OMR Answer Sheet against the number corresponding to the question.*

1.

KIT	TIK	ITK	IKC
(a)	(b)	(c)	(d)

3.

(a) (b) (c) (d)

2.

(a) (b) (c) (d)

4.

(a) (b) (c) (d)

Part II

Directions *In Question Nos. 5 to 8, a question figure is given on the left side and four answer figures marked (a), (b), (c) and (d) are given on the right side. Select the answer figure which is exactly the same as the question figure and darken the circle in the OMR Answer Sheet against the number corresponding to the question.*

5. **Que. Fig   Answer Fig.**

(a) (b) (c) (d)

7. **Que. Fig   Answer Fig.**

(a) (b) (c) (d)

6. **Que. Fig   Answer Fig.**

(a) (b) (c) (d)

8. **Que. Fig   Answer Fig.**

(a) (b) (c) (d)

Part III

Directions *In Question Nos. 9 to 12, there is a question figure on the left side, a part of which is missing. Observe the answer figure (a), (b), (c) and (d) on the right side and find out the answer figure which, without changing the direction, fits in the missing part of the question figure in order to complete the pattern in the question figure. Indicate your answer by darkening the circle in the OMR Answer Sheet against the number corresponding to the question.*

9. Que. Fig   Answer Fig.

(a)   (b)   (c)   (d)

10. Que. Fig   Answer Fig.

(a)   (b)   (c)   (d)

11. Que. Fig   Answer Fig.

(a)   (b)   (c)   (d)
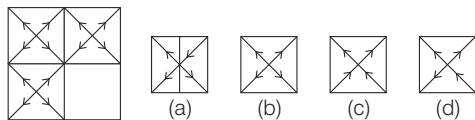
12. Que. Fig   Answer Fig.

(a)   (b)   (c)   (d)
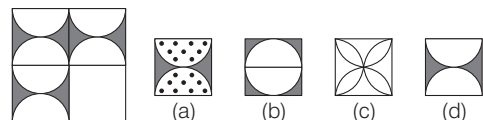
Part IV

Directions *In Question Nos. 13 to 16, there are three question figures on the left side and the space for the fourth figure is left blank. The question figures are in a series. Find out one figure from among the answer figures given on the right side which occupies the blank space for the fourth figure on the left side and completes the series. Indicate your answer by darkening the circle in the OMR Answer Sheet against the number corresponding to the question.*

13. Question Figures

?

Answer Figures

(a)   (b)   (c)   (d)
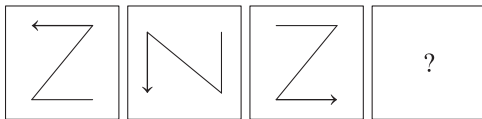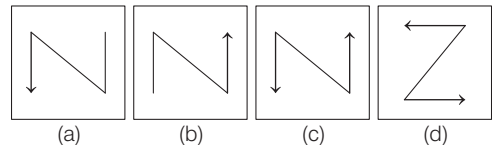
14. Question Figures

?

Answer Figures

(a)   (b)   (c)   (d)
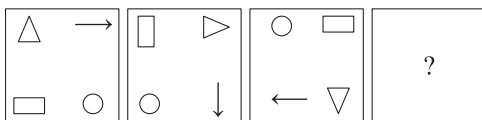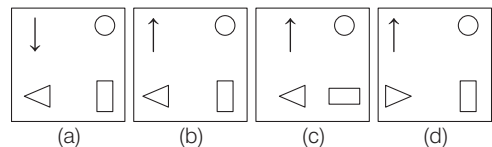
15. Question Figures

?

Answer Figures

(a)   (b)   (c)   (d)
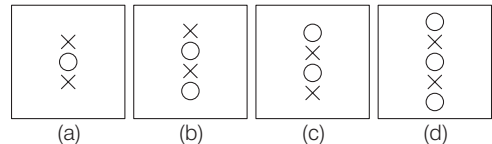
16. Question Figures

Answer Figures

(a)   (b)   (c)   (d)
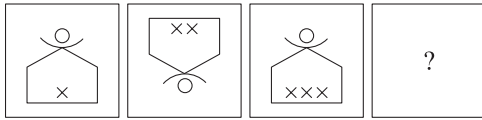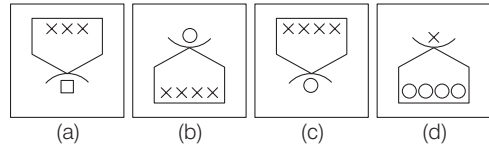
Part V

Directions *In Question Nos. 17 to 20, there are two sets of two question figures each. The second set has an interrogation mark (?). There exists a relationship between the first two question figures. Similar relationship should exist between the third and the fourth question figure. Select one of the answer figures which replaces the mark of interrogation. Darken the circle in the OMR Answer Sheet against the number corresponding to the question.*

17. Question Figures


?

Answer Figures

(a)   (b)   (c)   (d)

18. Question Figures

?

Answer Figures

(a)   (b)   (c)   (d)
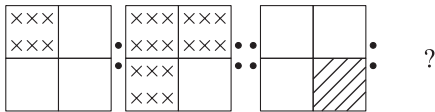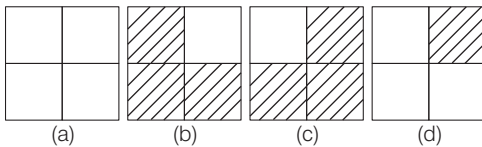
19. Question Figures

?

Answer Figures

(a)   (b)   (c)   (d)
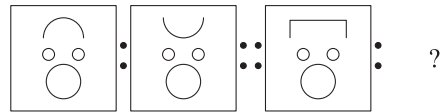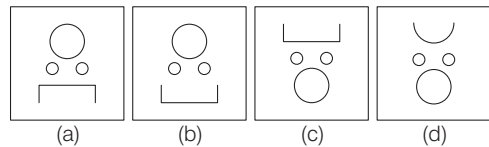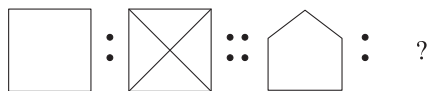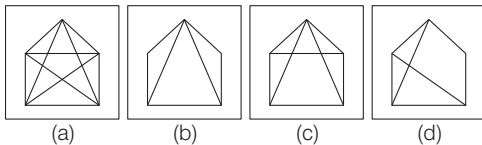
20. Question Figures

?

Answer Figures

(a)   (b)   (c)   (d)
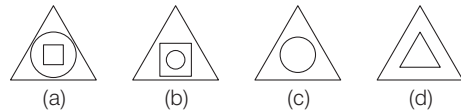
Part VI

Directions *In Question Nos. 21 to 24, one part of a geometrical figure (Triangle, Square, Circle) is on the left side as question figure and the other one is among the four answer figures (a), (b), (c) and (d) on the right side. Find the figure on the right side that completes the geometrical figure and darken the circle in the OMR Answer Sheet against the number corresponding to the question.*

21. Que. Fig.   Answer Fig.

(a)   (b)   (c)   (d)
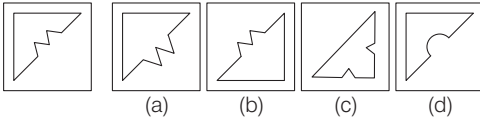
22. Que. Fig.   Answer Fig.

(a)   (b)   (c)   (d)
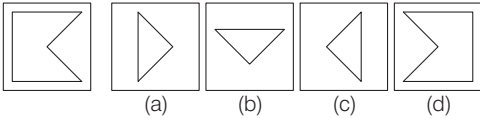
23. Que. Fig.   Answer Fig.

(a)   (b)   (c)   (d)
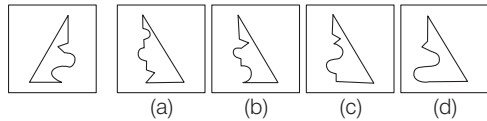
24. Que. Fig.   Answer Fig.

(a)   (b)   (c)   (d)

Part VII

Directions *In Question Nos. 25 to 28, there is a question figure on the left side and four answer figures marked* (a), (b), (c) *and* (d) *are given on the right side. Select the answer figure which is exactly the mirror image of the question figure when the mirror is held at XY. Indicate your answer by darkening the circle in the OMR Answer Sheet against the number corresponding to the question.*

25. Que. Fig.   Answer Fig.

(a)   (b)   (c)   (d)

26. Que. Fig.   Answer Fig.

(a)   (b)   (c)   (d)
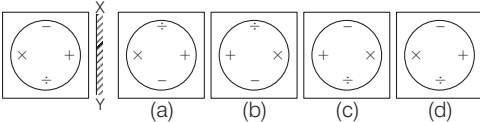
27. Que. Fig.   Answer Fig.

(a)   (b)   (c)   (d)
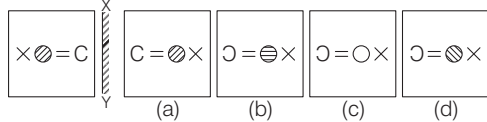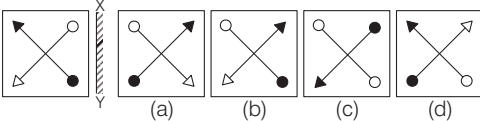
28. Que. Fig.   Answer Fig.

(a)   (b)   (c)   (d)
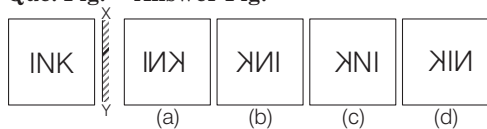
Part VIII

Directions *In Question Nos. 29 to 32, a piece of paper is folded and punched as shown in question figures on the left side and four answer figures marked* (a), (b), (c) *and* (d) *are given on the right side. Select the answer figure which indicates how the paper will appear when opened (unfolded). Indicate your answer by darkening the circle in the OMR Answer Sheet against the number corresponding to the question.*

29. Question Figures

Answer Figures

(a)   (b)   (c)   (d)
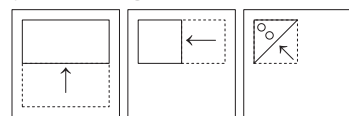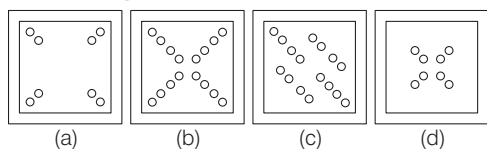
30. Question Figures

Answer Figures

(a)   (b)   (c)   (d)
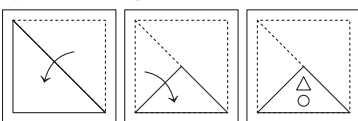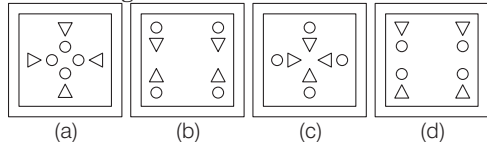
31. Question Figures

Answer Figures

(a)   (b)   (c)   (d)
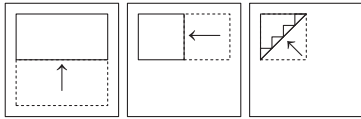
32. Question Figures

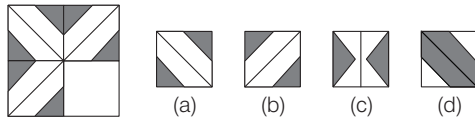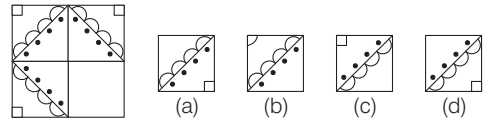Answer Figures

(a)   (b)   (c)   (d)
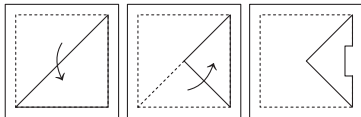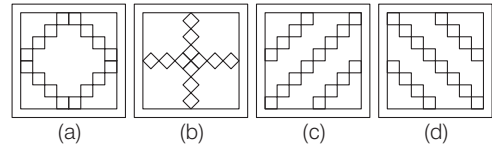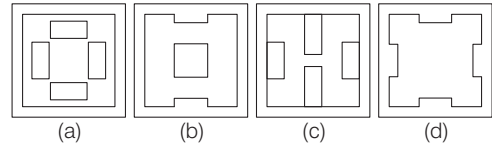
Part IX

Directions *In Question Nos. 33 to 36, a question figure is given on the left side and four answer figures marked (a), (b), (c) and (d) are given on the right side. Select the answer figure which can be formed from the cut-out pieces given in the question figure. Darken the circle in the OMR Answer Sheet against the number corresponding to the question.*

33. Que. Fig   Answer Fig.


(a)   (b)   (c)   (d)

34. Que. Fig   Answer Fig.

(a)   (b)   (c)   (d)
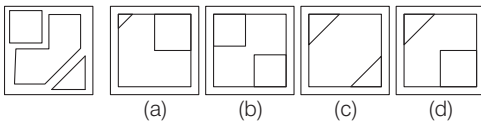
35. Que. Fig   Answer Fig.

(a)   (b)   (c)   (d)
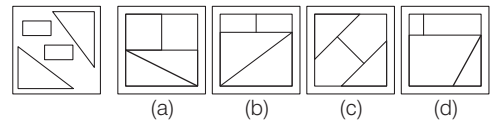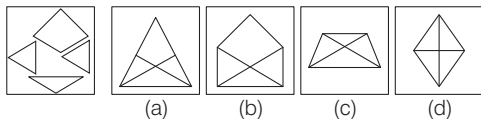
36. Que. Fig   Answer Fig.

(a)   (b)   (c)   (d)
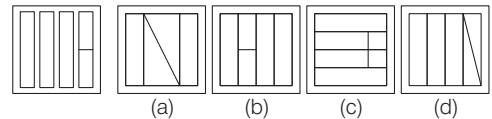
# Part X

Directions *In Question Nos. 37 to 40, a question figure is given on the left side and four answer figures marked (a), (b), (c) and (d) are given on the right side. Select the answer figure in which the question figure is hidden/embedded. Darken the circle in the OMR Answer Sheet against the number corresponding to the question.*

37. Que. Fig   Answer Fig.

(a)   (b)   (c)   (d)

38. Que. Fig   Answer Fig.

(a)   (b)   (c)   (d)
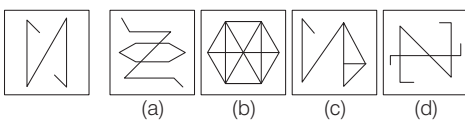
39. Que. Fig   Answer Fig.

(a)   (b)   (c)   (d)
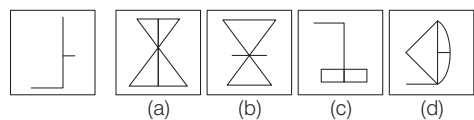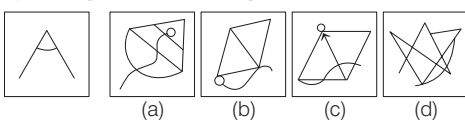
40. Que. Fig   Answer Fig.

(a)   (b)   (c)   (d)
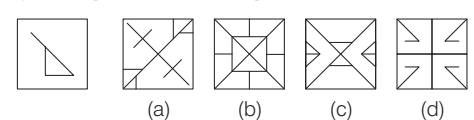
SECTION II : Arithmetic Test

Directions *For every question, four probable answers as* (a), (b), (c) *and* (d) *are given. Only one out of these is correct. Choose the correct answer and darken the circle in the OMR Answer Sheet against the number corresponding to the question.*

41. What is the difference between the greatest 7-digit number and the smallest 4-digit number?
(a) 9990999   (b) 9993999
(c) 9996999   (d) 9998999

42. What will be the difference between the greatest 6-digit number and the greatest 5-digit number?
(a) 100000   (b) 100001
(c) 99999   (d) 900000

43. Which of the following is not equal to 25?
(a) $50 - (100 \div 4)$
(b) $20 + (20 \div 4)$
(c) $10 + (5 \times 2) + (10 - 5)$
(d) $24 + (2 \times 1)$

44. The value of x which makes the following statement true is $\left(3\frac{7}{11} \times \frac{11}{5}\right) \div \left(\frac{3}{7} \times x\right) = \frac{4}{3}$
(a) $\frac{7}{2}$ (b) 14   (c) 7   (d) 28

45. The sum of HCF and LCM of 45, 60 and 75 is
(a) 330   (b) 960   (c) 915   (d) 630

46. $\frac{3}{8} \div \left(\frac{5}{3} - \frac{1}{6}\right) + \frac{5}{8}$ is equal to
(a) $\frac{3}{8}$ (b) $2\frac{5}{8}$ (c) $\frac{7}{8}$ (d) $1\frac{1}{8}$

47. If $15 - 15 \div 15 \times 6 = x$, then the value of x is
(a) 6   (b) 0   (c) 9   (d) 84

48. The value of $0.9 \div (0.3 \times 0.3)$ is
(a) 0.01   (b) 0.1   (c) 1   (d) 10

49. If the number B is 10% less than another number C and C is 5% more than 150, then B is equal to
(a) 157.85   (b) 153.85
(c) 151.75   (d) 141.75

50. 5% of 10% of 175 grams is equal to
(a) 8.75 gm   (b) 0.5 gm
(c) 0.875 gm   (d) 17.5 gm

51. Find the approximate result of the following expression (in whole numbers).
$49.6 \times 10.2 - 7.1 \times 29.7 - 5.1 \times 20.1$
(a) 390   (b) 290
(c) 209   (d) 190

52. A park is 1500 m long and 750 m wide. A cyclist has to take four rounds of this park. How much time will he take at the speed of 4.5 km/h?
(a) 40 h   (b) 20 h   (c) 10 h   (d) 4 h

53. One-fourth of birds of a flock are at a river bank and one-fifth of that flock are in their nest. Remaining 22 birds are wandering in search of food. What is the number of birds which are in their nest?
(a) 40   (b) 18   (c) 10   (d) 8

54. Amit bought a table for ₹ 1200 and spent ₹ 200 on its repair. He sold if for ₹ 1680. His profit or loss per cent is
(a) 12% profit   (b) $16\frac{2}{3}$% profit
(c) 20% loss   (d) 20% profit

55. A square and a rectangle have the same perimeter. If the side of the square is 16 m and the length of the rectangle is 18 m, the breadth of the rectangle is
(a) 14 m   (b) 15 m   (c) 16 m   (d) 17 m

56. How many bricks will be required for a wall 8 m long, 6 m high and 22.5 cm thick, if each brick measures 25 cm $\times$ 11.25 cm $\times$ 6 cm?
(a) 640   (b) 1380   (c) 6400   (d) 7600

57. We reached our destination at 2:45 pm after travelling for $4\frac{1}{2}$ h. When did we start?
(a) 9 : 00 am   (b) 10 : 00 am
(c) 10 : 15 am   (d) 8 : 15 am

58. The prime factorisation of 640 is
(a) $2 \times 2 \times 2 \times 2 \times 2 \times 5$
(b) $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 5$
(c) $2 \times 2 \times 2 \times 2 \times 2 \times 5 \times 5$
(d) $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 5$

59. In how many years does the sum of ₹ 1200 become ₹ 1800 at the rate of simple interest of 5% per annum?
(a) 10   (b) 20
(c) 15   (d) 25

60. 140.75×0.01 is equal to
(a) 140.75   (b) 14000.75
(c) 1.4075   (d) 0.14075

SECTION III : Language Test

Directions *There are four passages in this Section. Each passage is followed by five questions. Read each passage carefully and answer the questions that follow. For each question, four probable answers as* (a), (b), (c) *and* (d) *are given. Only one out of these is correct. Choose the correct answer and darken the circle in the OMR Answer Sheet against the number corresponding to the question.*
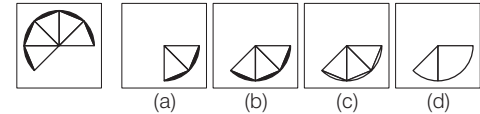
Passage 1

Travelling is both recreational and educative. It has always been regarded as an important part of education. In Europe, a young man is considered fully educated only when he has travelled through many countries of Europe. In ancient India also, our sages understood the great value of travelling. They made it a pious duty to visit various pilgrim centres situated in different parts of India. This encouraged the feeling of oneness among Indians.

61. It is important to ………… if one wants to get real education.
 (a) study   (b) work
 (c) travel   (d) meditate

62. Which one of the following words is a synonym of "recreational"?
 (a) educational   (b) thrilling
 (c) tiring   (d) sight-seeing

63. Visiting the ………… centres was considered holy in ancient India.

 (a) training   (b) pilgrim
 (c) city   (d) business

64. People have a feeling of oneness with others if they ……… a lot.
 (a) travel   (b) talk
 (c) play   (d) question

65. A sage is a person who is ………… .
 (a) learned   (b) smart
 (c) free   (d) wicked

Passage 2

Fire is to blame for the loss of countless lives and billions of rupees each and every year. Firefighters help protect people and their property from injury and damage. They put their lives on the line every time they respond to a call.

While on duty, firefighters must be ready to respond in a matter of minutes to just about any disaster that may occur. At every fire scene, a superior fire officer takes command and directs the jobs of all the people at the scene. Some firemen connect the hose lines to hydrants. Others manually operate the pumps to send water to the hoses. Teams of firefighters also operate ladders used to reach distances high in the air.

66. Which is not true about the firefighters?
 (a) They are brave
 (b) They often put their lives in danger
 (c) They never put their lives in danger
 (d) They are highly trained.

67. A firefighter has to prepare to extinguish a fire in
 (a) minutes   (b) hours
 (c) days   (d) weeks

68. Firefighters put their lives on the line means
 (a) they stand in a line
 (b) they fight fire

 (c) they put their lives in danger
 (d) they connect the hose line to hydrant

69. To 'operate manually' means to
 (a) make a man work
 (b) work with their hands
 (c) use a machine
 (d) use one's body

70. The word 'occur' means the same as
 (a) come
 (b) happen
 (c) call
 (d) fire

Passage 3

Hema lay on her bed staring at the stars stuck on the ceiling of her room. She was upset as none of the clothes seemed to fit her. She wore them again one by one but they were either too tight or too short. A cupboard full of clothes and she could not wear any of them. She then had a bright idea, her eyes lit up and she ran to her mother's room. "Ma, I need new clothes," she said, "but only after I donate all my old clothes to charity. No more amassing of clothes". Her mother smiled and hugged her. She did have a kind daughter!

71. Hema lay on her bed because she
    (a) was tired
    (b) liked looking at the stars
    (c) was wondering what to wear
    (d) was a lazy girl

72. She could not wear any of her clothes because
    (a) they were not fashionable
    (b) they were too colourful
    (c) she did not know what to choose
    (d) none of them fitted her

73. The synonym of the word, 'amassing' is
    (a) collecting   (b) distributing
    (c) sharing   (d) gifting

74. Hema is
    (a) greedy   (b) charitable
    (c) selfish   (d) miserly

75. The opposite of the word 'donate' is
    (a) give   (b) receive
    (c) distribute   (d) spend

Passage 4

To be fit and healthy, you need to be physically active. Regular physical activity protects you from serious diseases such as obesity, heart disease, cancer, mental illness, diabetes and arthritis. Riding a bicycle regularly is one of the best ways to reduce your risk of health problems associated with a sedentary lifestyle. Cycling is a healthy, low-impact exercise that can be enjoyed by people of all ages, from young children to older adults. It is also fun, cheap and good for the environment. Riding to work or the shop is one of the most time-efficient ways to combine regular exercise with everyday routine. An estimated one billion people ride bicycles every day for transport, recreation and sport. Cyclinig is a good way to reduce weight as it builds muscle and burns body fat. Research suggests that by cycling for half an hour everyday we can shed atleast five kilos of weight in a year.

76. The main focus of the passage is to tell us the advantages of
    (a) keeping fit
    (b) cycling
    (c) exercising
    (d) reducing weight

77. When the writer says "Cycling is good for the environment", which of the following is not correct?
    (a) It does not emit any unhealthy gas
    (b) It can be run without petrol or diesel
    (c) It does not pollute air
    (d) It can be ridden by all age groups

78. The word which means the opposite of the word 'sedentary' is
    (a) active   (b) lazy
    (c) inactive   (d) deskbound

79. A low-impact exercise is one which is
    (a) not tiring   (b) not costly
    (c) not efficient   (d) not boring

80. Regular cycling helps us in all of the following except to
    (a) reduce fat and strengthen muscles
    (b) combine fun with work
    (c) prevent serious accidents
    (d) remain healthy

Answers

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

Hints and Solutions

1. (d) Except option (d), in all the other options, letters 'K', 'I' and 'T' are used but in option (d) letter 'C' is used in place of letter 'T'.

2. (b) Except figure (b), in all the other figures, an angle of 90° is marked within the triangle.

3. (d) Except figure (d), all the other figures are same and can be obtained by rotating the other figure.

4. (a) Except figure (a), in all the other figures, a small line is intersecting the side of the square but in figure (a), the small line is intersecting the diagonal inside the square.

5. (b) Answer figure (b) is exactly the same as the question figure.

Question Figure　　Answer Figure (b)

6. (b) Answer figure (b) is exactly the same as the question figure.

Question Figure　　Answer Figure (b)

7. (b) Answer figure (b) is exactly the same as the question figure.

Question Figure　　Answer Figure (b)

8. (c) Answer figure (c) is exactly the same as the question figure.

Question Figure　　Answer Figure (c)

9. (a) Answer figure (a) will complete the pattern of the question figure.
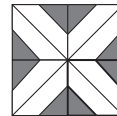
10. (b) Answer figure (b) will complete the pattern of the question figure.
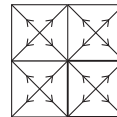
11. (d) Answer figure (d) will complete the pattern of the question figure.
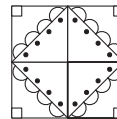
12. (d) Answer figure (d) will complete the pattero of the question figure.
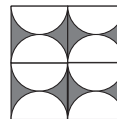
13. (b) In each step, the given figure is rotating 90° in anti-clockwise direction.

Hence, answer figure (b) will complete the given series.

14. (b) In each step all the four designs are moving from one corner to the other in clockwise direction. Also, each design is rotating 90° in clockwise direction. Hence, answer figure (b) will complete the given series.

15. (c) A sign of multiplication (×) and a sign of circle (O) is increasing alternatively. Hence, answer figure (c) will complete the given series.

16. (c) In each step, the main figure is inverted and also a sign of cross (×) is increasing within the main figure. Hence, answer figure (c) will complete the given series.

17. (c) In second figure the design ⊞ appeared in all the blocks except the block which is diagonally opposite to the block which has design ⊞ in first figure. Following the same pattern from figure third to forth answer figure (c) will replace the question mark.

18. (a) From the first figure to the second, lines meeting all the corners with each other are drawn with in the figure. Similarly, in third figure on drawing the lines from one corner to the others, we get answer figure (a).

19. (c) The topmost curved line in first figure is inverted in second figure. Similarly, the topmost design (⊓) in third figure will be inverted in four figure as shown in answer figure (c).

20. (b) From first figure to second figure, the lower design within the circle is placed inside the upper design. Similarly, from third figure to fourth the lower designed i.e. circle within the triangle will be placed inside the upper design i.e. square as shown in answer figure (b).

21. (b) Answer figure (b) will complete the incomplete square given in question figure.

22. (c) Answer figure (c) will complete the incomplete square given in question figure.

23. (d) Answer figure (d) will complete the incomplete triangle given in question figure.

24. (b) Answer figure (b) will complete the incomplete circle given in question figure.

25. (c) Answer figure (c) is the correct mirror image of the question figure.
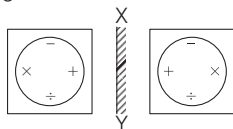
26. (a) Answer figure (a) is the correct mirror image of the question figure.
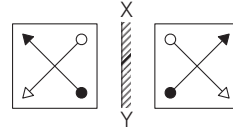
27. (d) Answer figure (d) is the correct mirror image of the question figure.
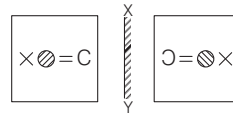
28. (b) Answer figure (b) is the correct mirror of the question figure.
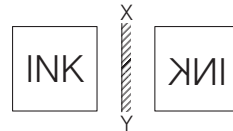
29. (b) After unfolding the folded and punched sheet it will look like as answer figure (b).
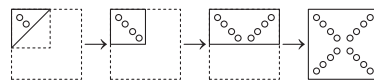
30. (c) After unfolding the folded and punched sheet it will look like as answer figure (c).
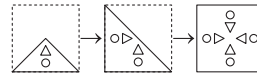
31. (a) After unfolding the folded and punched sheet it will look like as answer figure (a).
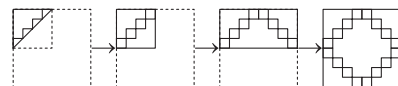
32. (d) After unfolding the folded and punched sheet it will look like as answer figure (d).
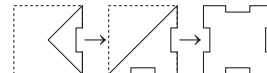
33. (d) Answer figure (d) can be formed from the cut-out pieces given in question figure.
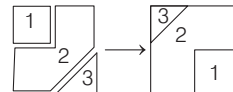
34. (b) Answer figure (b) can be formed from the cut pieces given in question figure.
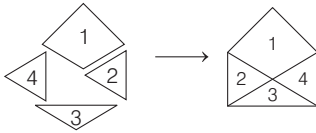
35. (b) Answer figure (b) can be formed from the cut pieces given in question figure.
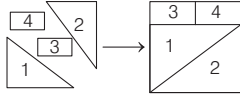
36. (b) Answer figure (b) can be formed from the cut pieces given in question figure.
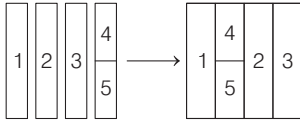
37. (b) The question figure is embedded in answer figure (b).
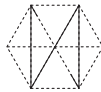
38. (c) The question figure is embedded in answer figure (c).
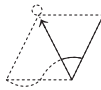
39. (d) The question figure is embedded in answer figure (d).
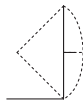
40. (b) The question figure is embedded in answer figure (b).
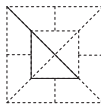
41. (d) The greatest 7-digit number = 9999999
The smallest 4-digit number = 1000
∴ Required difference (difference of these both numbers) = 9999999 − 1000 = 9998999

42. (d) The greatest 6-digit number = 999999
The greatest 5-digit number = 99999
∴ Required difference (difference of these both number) = 999999 − 99999 = 900000

43. (d) Option (a), 50 − (100 ÷ 4) = 50 − 25 = 25, this option is not the answer.

option (b), 20 + (20 ÷ 4) = 20 + 5 = 25, this option is not the answer.
option (c), 10 + (5 × 2) + (10 − 5)
$$= 10 + 10 + 5 = 25,$$
this option is not the answer.
Option (d), 24 + (2 × 1) = 24 + 2 = 26 ≠ 25, this option is the answer.

44. (b) $\left(3\dfrac{7}{11} \times \dfrac{11}{5}\right) \div \left(\dfrac{3}{7} \times x\right) = \dfrac{4}{3}$

$\Rightarrow \quad \left(\dfrac{40}{11} \times \dfrac{11}{5}\right) \div \left(\dfrac{3x}{7}\right) = \dfrac{4}{3}$

$\Rightarrow \quad 8 \times \dfrac{7}{3x} = \dfrac{4}{3}$

$\Rightarrow \quad 12x = 8 \times 7 \times 3$

$\Rightarrow \quad x = \dfrac{8 \times 7 \times 3}{12} = 14$

45. (c) Prime factors of 45, 60 and 75
$45 = 3 \times 3 \times 5;\ 60 = 2 \times 2 \times 3 \times 5;\ 75 = 3 \times 5 \times 5$
∴   HCF = 3 × 5   [to take common factors]
     = 15
LCM = 2 × 2 × 3 × 3 × 5 × 5
     (to take the higest power of prime factor)
     = 900
∴ Sum of HCF and LCM = 15 + 900 = 915

46. (c) $\dfrac{3}{8} \div \left(\dfrac{5}{3} - \dfrac{1}{6}\right) + \dfrac{5}{8} = \dfrac{3}{8} \div \left(\dfrac{10-1}{6}\right) + \dfrac{5}{8}$

$= \dfrac{3}{8} \times \dfrac{6}{9} + \dfrac{5}{8} = \dfrac{1}{4} + \dfrac{5}{8}$

$= \dfrac{2+5}{8} = \dfrac{7}{8}$

47. (c) $15 - 15 \div 15 \times 6 = x$

$\Rightarrow \quad 15 - 15 \times \dfrac{1}{15} \times 6 = x$

$\Rightarrow \quad 15 - 1 \times 6 = x$

$\Rightarrow \quad 15 - 6 = x \Rightarrow x = 9$

48. (d) $0.9 \div (0.3 \times 0.3)$
$$= 0.9 \div (0.09)$$
$$= \dfrac{0.9}{0.09} = \dfrac{90}{9} = 10$$

49. (d) According to the question,
$C = 5\%$ more than 150
$$= 150 + 150 \times \dfrac{5}{100}$$
$$= 150 + 7.5 = 157.5$$
and $B = 10\%$ less than C $= 157.5 - 157.5 \times \dfrac{10}{100}$
$$[\because C = 157.5]$$
$$= 157.5 - 15.75$$
$$= 141.75$$

50. (c) 5% of 10% of 175 g

$$= 175 \times \frac{10}{100} \times \frac{5}{100}$$

$$= \frac{175 \times 5}{1000} = \frac{875}{1000} = 0.875 \text{ g}$$

51. (d) $49.6 \times 10.2 - 7.1 \times 29.7 - 5.1 \times 20.1$

$$= 50 \times 10 - 7 \times 30 - 5 \times 20$$

[to take value in nearest integer]

$$= 500 - 210 - 100$$

$$= 500 - 310 = 190$$

52. (d) Length of park = 1500 m

Breadth of park = 750 m

Cover distance in 1 round of park = Perimeter of park

$$= 2 \text{ (Length + Breadth)}$$

$$= 2(1500 + 750)$$

$$= 2 \times 2250 = 4500 \text{ m}$$

∴ Cover distance in 4 rounds = 4 × cover distance in 1 round = 4 × 4500 = 18000 m

$$= \frac{18000}{1000} \text{ km} \qquad [\because 1 \text{ km} = 1000 \text{ m}]$$

$$= 18 \text{ km}$$

To take time in complete 4 rounds of park of cyclist

$$= \frac{\text{Distance}}{\text{Speed}} = \frac{18}{4.5} = \frac{180}{45} = 4 \text{ h}$$

53. (d) Let total number of birds be x,

According to the question,

$$\frac{x}{4} + \frac{x}{5} + 22 = x$$

$$\Rightarrow \qquad \frac{5x + 4x}{20} + 22 = x$$

$$\Rightarrow \qquad x - \frac{9x}{20} = 22$$

$$\Rightarrow \qquad \frac{20x - 9x}{20} = 22$$

$$\Rightarrow \qquad \frac{11x}{20} = 22$$

$$\Rightarrow \qquad x = \frac{22 \times 20}{11} = 40$$

Hence, total number of birds are 40.

Number of birds in their nest $= \frac{1}{5} \times x$

$$= \frac{1}{5} \times 40 = 8$$

Hence, the birds in their nest are 8.

54. (d) Amit bought a table = ₹ 1200

Spent on its repair = ₹ 200

∴ Total cost price of table = ₹ (1200 + 200) = ₹ 1400

Selling price of table = ₹ 1680

∴ Profit = Selling price − Cost price $\qquad [\because SP > CP]$

$$= 1680 - 1400 = ₹ 280$$

∴ Profit per cent

$$= \frac{\text{Profit}}{\text{Total cost price}} \times 100$$

$$= \frac{280}{1400} \times 100 = 20\%$$

55. (a) Given, side of square = 16 m

Length of rectangle = 18 m

According to the question,

Perimeter of rectangle = Perimeter of square

$$\Rightarrow 2 \text{ (Length + Breadth)} = 4 \times \text{side}$$

$$\Rightarrow 2 \text{ (18 + Breadth)} = 4 \times 16$$

$$18 + \text{Breadth} = \frac{4 \times 16}{2}$$

$$\Rightarrow \qquad \text{Breadth} = 32 - 18 = 14 \text{ m}$$

56. (c) Length of wall = 8 m = 800 cm $\qquad [\because 1 \text{m} = 100 \text{cm}]$

Breadth of wall = 6 m = 600 cm

Height of wall = 22.5 cm

∴ Volume of wall = Length × Breadth × Height

$$= 800 \times 600 \times 22.5 \text{ cm}^3$$

Volume of 1 brick $= 25 \times 11.25 \times 6 \text{ cm}^3$

∴ Required number of bricks of wall

$$= \frac{\text{Volume of wall}}{\text{Volume of 1 brick}}$$

$$= \frac{800 \times 600 \times 22.5}{25 \times 11.25 \times 6}$$

$$= 6400 \text{ bricks}$$

57. (c) Time for travel begin

$$= \text{Time for reaching place} - 4\frac{1}{2} \text{ h}$$

$$= 2 : 45 \text{ pm} - 4 : 30$$

$$= 14 : 45 - 4 : 30$$

$$= 10 : 15 \text{ am}$$

58. (d) Prime factorisation of 640

2	640
2	320
2	160
2	80
2	40
2	20
2	10
5	5
	1

∴ $640 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 5$

59. (a) Principal = ₹ 1200, Rate = 5% per annum (rate of SI)

Amount = ₹ 1800

∴ Simple interest = Amount − Principal

$\Rightarrow \qquad \dfrac{P \times r \times t}{100} = 1800 - 1200$

$\Rightarrow \qquad 1200 \times 5 \times t = 600 \times 100$

$\Rightarrow \qquad t = \dfrac{600 \times 100}{1200 \times 5} = 10 \, \text{yr}$

60. (c) $140.75 \times 0.01 = 1.4075$

[decimal in product is the sum of digits after decimal in both numbers]

61. (c) According to the passage, it is important to travel if one wants to get real education. So, option (c) 'travel' is the correct choice.

62. (b) 'Recreational' means 'connected with ways of enjoying oneself when one is not working'. So, its correct synonym will be 'thrilling', which means 'causing excitement and pleasure'.

63. (b) 'Pilgrim' is the suitable word to fill the blank as visiting the pilgrim centres was considered holy in ancient India.

64. (a) According to the passage, people have a feeling of oneness with others if they travel a lot. So, option (a) 'travel' is the correct choice.

65. (a) A sage is a person who is learned and wise. So, option (a) is the correct choice.

66. (c) Fire fighters are brave and highly trained persons who often put their lives in danger. So, option (c) 'They never put their lives in danger' is not true about the fire fighters.

67. (a) A fire fighter has to prepare to extinguish a fire in minutes. So, option (a) is the correct choice.

68. (c) Idiom 'Put life on line' means 'to put one's life in danger'. So, firefighters put their lives on the line means that they put their lives in danger.

69. (b) To 'operate manually' means 'to work or operate with one's hands'. So, option (b) is the correct choice.

70. (b) The word 'occur' means 'happen or take place'. So, option (b) 'happen' is the correct choice.

71. (c) Hema lay on her bed because she was wondering what to wear.

72. (d) Hema could not wear any of her clothes because none of them fitted her and were either too tight or too short for her.

73. (a) 'Amassing' means 'to gather or collect something in large amount'. So, option (a) 'collecting' is the correct synonym of the given word.

74. (b) Hema is a charitable person as she wanted to donate all her old clothes.

75. (b) The word 'donate' means 'to give something like money or goods to some cause such as charity'. So, option (b), 'receive' is its correct antonym which means 'to take or accept something'.

76. (b) The main focus of the passage is to tell us the advantages of cycling. In the passage, the author tells about the benefits of cycling and how it helps in reducing the health related problems.

77. (d) When the writer says that ''Cycling is good for the environment''. He means that it does not emit any unhealthy gas, can be run without petrol or diesel and does not pollute air. So, option (d) ''It can be ridden by all age groups'' is not correct in the context of the given statement.

78. (a) 'Sedentary' means 'involving' little exercise or physical activity'. So, option (a) 'active' is its correct antonym which means 'involving physical effort and action'.

79. (a) A low-impact exercise is one which is not tiring. Cycling is one of the best example of low-impact exercises that can be enjoyed by people of all ages.

80. (b) Regular cycling helps us to reduce fat and strengthen then muscles and remain healthy and preventing serious accidents. It does not help in combine fun with work, so option (b) is the correct choice.