Sainik School
Entrance Exam (Class 6)
Solved Paper 2018

Time : 2 hrs   Marks : 250
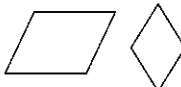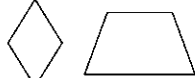
Instructions

1. This question paper contains 100 questions, which is divided into following three sections.
   Section A Mathematics (50 Questions); **Section B** General Knowledge (25 Questions);
   Section C English (25 Questions).
2. Section A carries 150 Marks, Section B carries 50 Marks and Section C carries 50 Marks.
3. The candidate is expected to attempt all questions.

Paper 1

Section A Mathematics

1. The greatesr 8-digits number with given digits 5, 8, 7, 5, 2, 0, 6 and 1 is
(a) 88765210　　　　　(b) 87765210
(c) 88765521　　　　　(d) 87655210

2. Choose the correct option if number 52806, 52086, 52860, 52800 and 58260 are arranged in ascending order.
(a) 52086, 52806, 52860, 52800, 58260
(b) 52800, 52860, 52086, 58260, 52806
(c) 52086, 52800, 52806, 52860, 58260
(d) 52800, 52806, 52860, 52086, 58260

3. A number that must be subtracted from 925564 to make it equal to the sum of 234251 and 352421 will be
(a) 238892　　　　　(b) 338882
(c) 338892　　　　　(d) 337892

4. The product of 10101×25 is
(a) 252725　　　　　(b) 252525
(c) 25025025　　　　(d) 272725

5. The average age of 3 sisters is 15. If the ages of 2 sisters are 12 yr and 15 yr, the age of the third sister is
(a) 21 yr　　　　　(b) 17 yr
(c) 18 yr　　　　　(d) 16 yr

6. 7/6 of a leap =........ weeks
(a) 427　　　(b) 35　　　(c) 61　　　(d) 13

7. Write Roman numerals CDXLIX in Arabic numerals.
(a) 569　　　　　(b) 449
(c) 549　　　　　(d) 469

8. Value of $(700 \div 10) - \{(12 \times 8) \div (34 - 10)\}$ is
(a) 69　　　　　(b) 68
(c) 67　　　　　(d) 66

9. 2 =.........%
(a) 200　　　　　(b) 0.02
(c) 2/100　　　　(d) 20

10. Vicky bought a bicycle for ₹ 3000 and sold it for ₹ 2700. What was his loss or gain per cent?
(a) 10% loss　　　　　(b) 10% gain
(c) 11.11% gain　　　　(d) 11.11% loss

11. A train leaves Hyderabad at 01:15 pm on Friday and reaches Chennai at 07:30 am on Saturday. The duration of the journey is
(a) 18 h 30 min　　　　(b) 17 h 45 min
(c) 18 h 15 min　　　　(d) 17 h 15 min

12. Karishma bought two necklace for ₹ 139500. She sold one of them for ₹ 75000 and the other one for ₹ 80000. How much money did she gain?
(a) ₹ 25500　　　　　(b) ₹ 15500
(c) ₹ 20500　　　　　(d) ₹ 15000

13. A tall office building has 85 floors. Each floor has 48 windows. Each window is to be decorated with 64 tiny bulbs. How many bulbs would be needed to decorate all the windows?
(a) 261120   (b) 273920
(c) 456960   (d) 209920

14. The smallest 5-digits number that is divisible by 19 is
(a) 10019   (b) 10013   (c) 10032   (d) 10000

15. The greatest number that divides 38 and 68 leaving 8 as remainder in each case is
(a) 10   (b) 15   (c) 60   (d) 30

16. The decimal notation of 10 kg 2 dag 6 g is
(a) 10.260 kg   (b) 10.206 kg
(c) 10.026 kg   (d) 10.006 kg

17. Which of the following pair of angles are supplementary?
(a) 46° and 44°   (b) 113° and 67°
(c) 245° and 115°   (d) 90° and 180°

18. The perimeter of the rectangle and square are same. Length and breadth of the rectangle are 10 cm and 8 cm, respectively. What is the area of the square?
(a) 114 sq cm   (b) 36 sq cm
(c) 81 sq cm   (d) 64 sq cm

19. Which of the following measures of three angles can be those of a triangle?
(a) 52°, 69°, 79°   (b) 30°, 69°, 71°
(c) 132°, 169°, 59°   (d) 32°, 69°, 79°

20. Which statement is true?
(a) All hexagons are triangles because they have atleast 3 sides
(b) All octagons are polygons because they have atleast 3 sides
(c) All parallelograms are rectangles because they have 2 sets of parallel sides
(d) All rhombus are squares because they have 4 sides that are all the same length

21. The fraction equivalent to 1.25 is
(a) $1\frac{1}{4}$ (b) $12\frac{1}{2}$ (c) $1\frac{1}{8}$ (d) $12\frac{1}{4}$

22. The sum of two numbers is 11009. If one of them is 9999, the other number is
(a) 1010   (b) 1110   (c) 2110   (d) 21008

23. Simplify $6 \div 6 + 6 \times 6 - 6$.
(a) 1   (b) 7   (c) 31   (d) 36

24. Simplify $1\frac{1}{24} - 1 + \frac{7}{36}$.
(a) $\frac{17}{72}$ (b) $1\frac{17}{72}$
(c) $\frac{7}{60}$ (d) $\frac{5}{60}$

25. Sara poured $1\frac{1}{8}$ cups of lemonada each in 5 glasses. What was the total amount of lemonade Sara poured in 5 glasses?
(a) $3\frac{7}{8}$ cups   (b) $5\frac{1}{8}$ cups
(c) $5\frac{5}{8}$ cups   (d) $6\frac{1}{8}$ cups

26. Ritu has 1/4 of a sack of rice. She divides the rice equally into 7 bags. What fraction of the full sack of rice is in each bag?
(a) 1/28   (b) 1/7   (c) 2/11   (d) 11/28

27. $1 + 0 + 9/100 + 3/1000$ is equal to
(a) 1.093   (b) 1.903
(c) 1.93   (d) 1.0093

28. Which two quadrilaterals have both 2 pairs of parallel sides and 2 acute angles?

29. What is the sum of 20.08, 20.008, 20.088 and 20.888?
(a) 81.064   (b) 81.604
(c) 80.064   (d) 80.888

30. Round off 37504 to the nearest hundreds is
(a) 37500   (b) 37000
(c) 38000   (d) 30000

31. A train is running at a speed of 75 km/h. How much time will it take to cover a distance of 350 km?
(a) 4 h   (b) 5 h
(c) 4 h 30 min   (d) 4 h 40 min

32. A block of wood is in the form of a cube, its edge is 4 m. How many rectangular pieces of dimension 20 cm × 10 cm × 5 cm can be cut from the block?
(a) 640   (b) 64
(c) 6400   (d) 64000

33. In how many years, a sum of ₹ 500 at 5% per annum will amount of ₹ 600?
(a) 3 yr   (b) 4 yr
(c) 5 yr   (d) 6 yr

34. The average of four numbers is 30. If the sum of first three numbers is 85, the fourth number is
(a) 35   (b) 25
(c) 45   (d) 55

35. What per cent of 10 km in 10 m?
(a) 0.1%   (b) 1.0%
(c) 10.0%   (d) 40.0%

36. The number of square tiles, of side 15 cm, required for flooring a room of size 3.6 m $\times 4.5$ m, will be
(a) 720   (b) 360   (c) 10800   (d) 5400

37. The smallest odd number formed by using the digits 1, 2, 3, 4 and 5 is
(a) 12345   (b) 12435
(c) 12453   (d) 12534

38. Which of the following numbers are arranged in ascending order?
(a) $\frac{1}{3}, \frac{1}{2}, 0.25$ (b) $0.25, \frac{1}{2}, \frac{1}{3}$
(c) $0.25, \frac{1}{3}, \frac{1}{2}$ (d) $\frac{1}{2}, \frac{1}{3}, 0.25$

39. A boat is flowing in still water at the speed of 18 km/h. The speed of boat (in m/s) is
(a) 50   (b) 72   (c) 7.2   (d) 5

40. The value of 200°F in degree Celsius is ....
[Use $C = 5/9\,(F - 32)$]
(a) 80.3°C   (b) 93.3°C
(c) 100.3°C   (d) 105.3°C

41. Find the difference between the number 36490 and the number obtained by interchanging the places of 6 and 9.
(a) 2970   (b) 3030   (c) 2070   (d) 2790

42. Convert (3.75 of 5% + 7.25 of 10%) into decimals.
(a) 0.9152   (b) 0.9521   (c) 0.9125   (d) 0.9527

43. What is the next row of numbers?

28	84	112
38	114	152
48	144	192

(a) 58   174   232   (b) 58   184   244
(c) 68   204   272   (d) 68   214   292

44. A boy runs around a rectangular field of length 40 m and breadth 25 m. How much distance will he run if he takes 4 rounds of that field?
(a) 4000 m   (b) 260 m
(c) 520 m   (d) 400 m

45. A room is 15m long and 10m broad. Find the cost of carpeting its floor is 1 sq cm of carpet costs ₹ 2.00.
(a) ₹ 300   (b) ₹ 300000
(c) ₹ 30000   (d) ₹ 3000000

46. The cost of a pack of 15 balls is ₹ 300 and a pack of 12 shuttle cock is ₹ 96. If Raghu bought 1 ball and 1 shuttle cock, how much would he pay to shopkeeper?
(a) ₹ 24   (b) ₹ 22   (c) ₹ 26   (d) ₹ 28

47. The greatest number which divides 624 and 936 exactly is 312. Find the smallest number which is divisible by 624 and 936.
(a) 1820   (b) 1872   (c) 1272   (d) 1864

48. A person purchased an old bicycle for ₹ 450 and spends ₹ 50 on its maintenance. If he sold the old bicycle for ₹ 600, then his profit percentage is
(a) 15%   (c) 18%   (c) 20%   (d) 25%

49. Find the area of figure given below

(a) 56 sq cm   (b) 48 sq cm
(c) 44 sq cm   (d) 60 sq cm

50. Amar spent 3/8 of his time studying Science. He spent $\frac{2}{5}$ as much time studying English as Science. What fraction of Amar's study time was spent studying English?
(a) $\frac{1}{40}$ (b) $\frac{3}{20}$ (c) $\frac{31}{40}$ (d) $\frac{15}{16}$

Section B General Knowledge

51. Which feature helps a coconut fruit to float in water?
(a) A fibrous outer covering
(b) A spongy part
(c) Presence of hook
(d) Presence of spine

52. Which of the following is a non-communicable disease?
(a) Chickenpox   (b) Beri-beri
(c) Common cold   (d) Measles

53. The rabies virus is carried by
(a) cockroaches   (b) hens
(c) dogs   (d) rabbits

54. Milk turning sour is a
(a) physical change   (b) reversible change
(c) chemical change   (d) None of these

55. The wearing off or carrying away of soil by the action of water or wind is called
(a) storm   (b) flood
(c) soil erosion   (d) deforestation

56. Whales and dolphins are classified as
(a) fishes   (b) reptiles
(c) mammals   (d) amphibians

57. The working of the internal organs of our body is controlled by this system
(a) reproductive   (b) circulatory
(c) respiratory   (d) nervous

58. A person might faint if his heart does not send enough blood to his
(a) feet   (b) liver   (c) kidneys   (d) brain

59. The upward push of water on a floating object is called
(a) buoyant force   (b) volume
(c) density   (d) pressure

60. The first artificial satellite launched by India in 1975 was
(a) Sputnic 1   (b) Aryabhatta
(c) Charaka   (d) Insat

61. Those who study earthquakes are called
(a) geologist   (b) seismologists
(c) astronomers   (d) astrologers

62. Which of the following gasses is not a greenhouse gas?
(a) Carbon dioxide   (b) Oxygen
(c) Methane   (d) CFC

63. The model of the Earth is called a
(a) circle   (b) sphere   (c) globe   (d) marble

64. Agriculture cannot be practiced on mountains on a large scale as they
(a) are thinly populated   (b) have a shortage of land
(c) have a thin soil cover (d) have unsuitable climate

65. The condition of the atmosphere at a given place and time is called
(a) season   (b) climate
(c) altitude   (d) weather

66. The highway of Central Africa is another name for
(a) River Nile   (b) River Congo
(c) River Zimbani   (d) River Kwango

67. Most of the grasslands of the world are found in the
(a) Tropical zone   (b) Temperate zone
(c) Torrid zone   (d) Frigid zone

68. Any sound louder than 90 decibels can cause
(a) asthma   (b) digestive problems
(c) typhoid   (d) loss of hearing

69. Aligarh Muslim University is associated with
(a) Rabindranath Tagore (b) Tansen
(c) Kalidas   (d) Syed Ahmad Khan

70. The English Government introduced the policy of divide and rule to
(a) educated Indian   (b) encourage nationalism
(c) reform Indians   (d) suppress nationalism

71. Purna Swaraj means
(a) non-cooperation
(b) civil disobedience
(c) boycott
(d) complete independence

72. The Lok Sabha can have a maximum of
(a) 12 members   (b) 552 members
(c) 238 members   (d) 543 members

73. The league of Nations was formed to prevent
(a) destruction   (b) loss of lives
(c) droughts   (d) another world war

74. The world has been made smaller due to
(a) wheels   (b) steam engines
(c) fast means of transport (d) cars

75. Internet is a source of information on
(a) documentaries   (b) e-mail
(c) any topic   (d) a few topic

Section C English

Directions (Q.Nos. 76-81) *Read the following passage and answer the questions.*

HORACE DENBY

Everyone thought that Horace Denby was a good and honest citizen. He was about fifty years old and unmarried, and he lived with a housekeeper who worried over his health. In fact, he was usually very well and happy, except for attacks of hay fever in summer. He made expensive locks and was successful enough at his business to have two helpers. Yes, Horace Denby was good and respectable - but not completely honest. Fifteen years ago, Horace had served his first and only sentence in prison for stealing jewels. The priest at the prison had liked Horace - everyone did - and had tried to help him to live an honest life. But Horace did not want to become honest. He only wanted to make sure that his dishonesty never got him into trouble again.

76. Horace Denby was   .
(a) old   (b) unmarried
(c) handicapped   (d) Both (a) and (b)

77. .... worried about the health of Horace.
(a) his wife   (b) the priest
(c) his housekeeper   (d) None of these

78. For stealing jewels, Horace was sent to prison
(a) only once   (b) twice
(c) thrice   (d) never

79. The profession of Horace was
(a) businessman   (b) thief
(c) housekeeper   (d) locksmith

80. Choose the word, which means the opposite of EXPENSIVE.
(a) cheap   (b) luxurious
(c) costly   (d) heavy

81. Choose the word which means almost same as UNMARRIED.
(a) handsome   (b) widow
(c) young   (d) bachelor

Directions (Q.Nos. 82-90) *Choose the most appropriate option given against each question.*

82. A heard of cows or ....
(a) birds   (b) elephant
(c)sheep   (d) horse

83. This is my book and that is ....
(a) yours   (b) your
(c) our   (d) ours

84. Rajan's father and Rohan's father .... businessmen.
(a) are   (b) have
(c) is   (d) has

85. My friends .... been asking for the party photographs.
(a) do   (b) does
(c) have   (d) has

86. Rakesh .... his mother tongue very fluently.
(a) speak   (b) speaking
(c) speaks   (d) None of these

87. Ankit and his family .... in Europe for three weeks.
(a) have been travelling   (b) have travelling
(c) been travelling   (d) have travelled

88. Bharti .... yoga classes these days.
(a) attending   (b) has attending
(c) is attending   (d) has been attending

89. My house is .... as yours.
(a) big   (b) as big
(c) bigger   (d) biggest

90. This is the .... comics I have ever read.
(a) most interesting
(b) more interesting
(c) less interesting
(d) None of the above

Directions (Q.Nos. 91-92) *Select one word from the options for the given definition.*

91. A book or work of art whose author is unknown
(a) anonymous   (b) playwright
(c) novelist   (d) poet

92. A person who believes in the existence of God
(a) athiest   (b) thiest
(c) agnostic   (d) pacifist

Directions (Q.Nos. 93-94) *Select the most appropriate option for question tag.*

93. I have completed my homework, ...?
(a) have I   (b) has I
(c) do I   (d) haven't I

94. He does not do his work sincerely ....?
(a) does he   (b) did he
(c) doesn't he   (d) do he

Directions (Q.Nos. 95-96) *Rearrange the following words/group of words to make meaningful sentences. Choose the correct sequence given in the options.*

95. and grandpa (A)/ my grandma (B)/ too much (C)/ Iove each other (D).
(a) BDAC   (b) BACD
(c) DBCA   (d) BADC

96. was very pretty (A)/ in her childhood (B)/ my grandma (C)/ and beautiful (D).
(a) CBAD   (b) ADBC
(c) CADB   (d) CDAB

Directions (Q.Nos. 97-98) *Mark the option with the correct spelling of the given words.*

97. (a) Address   (b) Adres
(c) Adress   (d) Addres

98. (a) Appresiation   (b) Appreciation
(c) Appreciason   (d) Apreciation

Directions (Q.Nos. 99-100) *Choose the appropriate option to fill in the blanks.*

99. 'Books' is for 'book', ... is for 'ship'.
(a) sheeps   (b) ships
(c) shepherds   (d) sheep

100. 'Kids' is for 'kid', ... is for 'child'.
(a) childs   (b) child
(c) children   (d) None of these

Answers

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

Hints & Solutions

1. Required greatest 8-digits number = 87655210

2. Required ascending order = 52086 < 52800
   < 52806 < 52860 < 58260

3. Let the number = x
   According to the question,
   $$925564 - x = 234251 + 352421$$
   $$\Rightarrow \qquad x = 925564 - 586672$$
   $$\therefore \qquad x = 338892$$

4. $10101 \times 25 = (10000 + 100 + 1) \times 25$
   $$= 250000 + 2500 + 25 = 252525$$

5. Sum of 3 sisters $= 15 \times 3 = 45$ yr
   $\therefore$ Sum of 2 sisters $= 12 + 15 = 27$ yr
   $\therefore$ Age of third sister $= 45 - 27 = 18$ yr

6. $\dfrac{7}{6}$ of a leap year $= \dfrac{7}{6} \times \dfrac{366}{7}$ weeks = 61 weeks
   $$\left[\begin{array}{l} \because 1 \text{ leap year} = 366 \text{ days} \\ \therefore 366 \text{ days} = \dfrac{366}{7} \text{ weeks} \end{array} \right]$$

7. CDXLIX $= (500 - 100) + (50 - 10) + 9$
   $$= 400 + 40 + 9 = 449$$

8. $(700 \div 10) - \{(12 \times 8) \div (34 - 10)\}$
   $$= \dfrac{700}{10} - \{96 \div 24\} = 70 - 4 = 66$$

9. $2 = 2 \times 100\% = 200\%$

10. CP of bicycle $= ₹3000$
   SP of bicycle $= ₹2700$
   $\therefore$ Loss $=$ CP $-$ SP
   $$= 3000 - 2700 = ₹300$$

$\therefore$ Required loss percentage $= \dfrac{\text{Loss}}{\text{CP}} \times 100$
   $$= \dfrac{300}{3000} \times 100 = 10\%$$

11. Required duration of journey
   $$= (12:00 + 07:30) - 01:15$$
   $$= 18 \text{ h } 15 \text{ min}$$

12. CP of two necklace $= ₹139500$
   SP of one necklace $= ₹75000$
   SP of second neklace $= ₹80000$
   SP of two necklace $= 75000 + 80000 = ₹155000$
   $\because$ SP > CP, then profit is occured.
   $\therefore$ Profit $=$ SP $-$ CP $= 155000 - 139500 = ₹15500$

13. Requird number of bulbs $= 85 \times 48 \times 64$
   $$= 261120$$

14. The smallest 5-digits number $= 10000$

```
18)1000(526
   95
   50
   38
  120
  114
    6
```

   $\therefore$ Required number $= 1000 + (19 - 6)$
   $$= 10000 + 13 = 10013$$

15. HCF of $(38 - 8 =) 30$ and $(68 - 8 =) 60$

```
30)60(2
   60
    ×
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   $\therefore$ Required number $= 30$

16. 10 kg 2 dag 6 g = 10 kg + 0.02 kg + 0.006 kg

$= 10.026$ kg $\qquad \left[\begin{array}{l} \because\ 1\ \text{dag} = \dfrac{1}{100}\text{kg} \\ \because\ 1\ \text{g} = \dfrac{1}{1000}\text{kg} \end{array} \right]$

17. If the sum of two angles is 180°, then they are called supplementary.
From option (b),
$$113° + 67° = 180°$$

18. Let the side of square = a
Perimeter of rectangle = Perimeter of square
$\Rightarrow \qquad\qquad 2(10 + 8) = 4 \times a$
$\Rightarrow \qquad\qquad \dfrac{2 \times 18}{4} = a$
$\therefore \qquad\qquad a = 9$
$\therefore$ Area of square $= (a)^2 = (9)^2 = 81$ sq cm

19. $\because$ Sum of three angles of triangle is 180°.
From option (d),
$$32° + 69° + 79° = 180°$$

20. Option (b) is correct.

21. $1.25 = \dfrac{125}{100} = \dfrac{5}{4} = 1\dfrac{1}{4}$

22. Required number $= 11009 - 9999 = 1010$

23. $6 \div 6 + 6 \times 6 - 6 = \dfrac{6}{6} + 36 - 6 = 1 + 30 = 31$

24. $1\dfrac{1}{24} - 1 + \dfrac{7}{36} = \dfrac{25}{24} - 1 + \dfrac{7}{36}$
$\qquad\qquad = \dfrac{75 - 72 + 14}{72} = \dfrac{3 + 14}{72} = \dfrac{17}{72}$

25. $\because$ Lemonade poured in 1 glass $= 1\dfrac{1}{8}$ cups

$\therefore$ Lemonade poured in 5 glasses $= 5 \times \dfrac{9}{8}$
$\qquad\qquad\qquad = \dfrac{45}{8} = 5\dfrac{5}{8}$ cups

26. Rice in 7 bags $= \dfrac{1}{4}$

$\therefore$ Rice in 1 bag $= \dfrac{1}{4 \times 7} = \dfrac{1}{28}$

27. $1 + 0 + \dfrac{9}{100} + \dfrac{3}{1000} = 1 + 0 + 0.9 + 0.003 = 1.093$

28. Quadrilaterals in option (c) have 2 pairs of parallel sides and 2 acute angles.

29. $20.08 + 20.008 + 20.088 + 20.888 = 81.064$

30. $37504 \approx 37500$ \qquad (nearest hundreds)

31. Required time $= \dfrac{\text{Distance}}{\text{Speed}} = \dfrac{350}{75} = 4$ h 40 min

32. Required number of block
$= \dfrac{\text{Volume of cube}}{\text{Volume of cuboid}} = \dfrac{4\ \text{m} \times 4\ \text{m} \times 4\ \text{m}}{20\ \text{cm} \times 10\ \text{cm} \times 5\ \text{cm}}$
$= \dfrac{400 \times 400 \times 400}{20 \times 10 \times 5} \qquad [\because\ 1\ \text{m} = 100\ \text{cm}]$
$= \dfrac{64000000}{1000} = 64000$

33. Principal (P) = ₹500, Amount = ₹600
Rate (R) = 5%
$\therefore$ Simple interest = Amount − Principal
$\qquad\qquad = 600 - 500 = ₹100$
$\therefore$ Simple interest $= \dfrac{\text{Principal} \times \text{Rate} \times \text{Time}}{100}$
$\Rightarrow \qquad 100 = \dfrac{500 \times 5 \times \text{Time}}{100}$
$\therefore$ Time = 4 yr

34. Sum of four numbers $= 30 \times 4 = 120$
Sum of first three numbers = 85
$\therefore$ Fourth number $= 120 - 85 = 35$

35. Required percentage $= \dfrac{10\ \text{m}}{10\ \text{km}} \times 100$
$= \dfrac{10}{10 \times 1000} \times 100 \quad [\because 1\ \text{km} = 1000\ \text{m}]$
$= \dfrac{1}{10} = 0.1\%$

36. Required number of tiles $= \dfrac{\text{Area of floor}}{\text{Area of tiles}}$
$= \dfrac{3.6\ \text{m} \times 4.5\ \text{m}}{15\ \text{cm} \times 15\ \text{cm}} = \dfrac{360 \times 450}{15 \times 15} \quad [\because 1\text{m} = 1000\text{cm}]$
$= 720$

37. Required smallest odd number $= 12345$

38. $0.25, \dfrac{1}{3} = 0.33, \dfrac{1}{2} = 0.50$
$\therefore$ Required order $= 0.25 < 0.33 < 0.50$
$\qquad\qquad = 0.25 < \dfrac{1}{3} < \dfrac{1}{2}$

39. Speed of boat $= 18$ km/h
$= 18 \times \dfrac{5}{18}$ m/s $= 5$ m/s $\qquad \left[\because 1\text{km}/\text{h} = \dfrac{5}{18}\text{m/s} \right]$

40. Given, C $= \dfrac{5}{9}(F - 32)$
$\Rightarrow \qquad$ C $= \dfrac{5}{9}(200 - 32) = \dfrac{5}{9} \times 168 = 93.3\ °C$

41. Original number = 36490
After interchanging number = 39460
$\therefore$ Required difference $= 39460 - 36490 = 2970$

42. 5% of $3.75 + 10\%$ of 7.25

$$= 3.75 \times \frac{5}{100} + 7.25 \times \frac{10}{100}$$

$$= 0.1875 + 0.725 \quad = 0.9125$$

43.

$$+10 \begin{cases} 28 \\ 38 \\ 48 \\ 58 \end{cases} \quad +30 \begin{cases} 84 \\ 114 \\ 144 \\ 174 \end{cases} \quad +40 \begin{cases} 112 \\ 152 \\ 192 \\ 232 \end{cases}$$

44. Distance covered in 1 round

$= $ Perimeter of rectangle

Distance covered in 4 rounds $= 4 \times 2 \times 65$

$$= 520 \, \text{m}$$

45. Area of room $= 15 \times 10$

$$= 150 \, \text{sq m or} = 1500000 \, \text{sq cm}$$

1 sq cm of carpet costs $= ₹2$

1500000 sq cm of carpet costs $= 2 \times 1500000$

$$= ₹3000000$$

46. Cost of 1 ball $= \dfrac{300}{15} = ₹20$

Cost of 1 shuttle cock $= \dfrac{96}{12} = ₹8$

$\therefore$ Required amount $= 20 + 8 = ₹28$

47. First number $\times$ Second number $= $ LCM $\times$ HCF

$\Rightarrow \qquad 624 \times 936 = $ LCM $\times 312$

$\Rightarrow \qquad$ LCM $= \dfrac{624 \times 936}{312} = 1872$

48. CP of bicycle $= 450 + 50 = ₹500$

SP of bicycle $= ₹600$

$\therefore$ Profit of bicycle $= 600 - 500 = ₹100$

$\therefore$ Profit percentage $= \dfrac{100}{500} \times 100 = 20\%$

49.
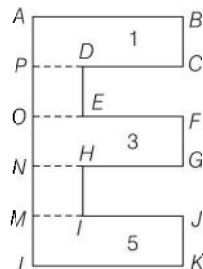
$AB = PC = OF = NG = MJ = LK = 6 \, \text{cm}$,

$BC = AP = PD = OE = NH = MI = 2 \, \text{cm}$

Area of figure 1 ($ABPC$) $= 6 \times 2 = 12 \, \text{sq cm}$

Area of figure 2 ($PDEO$) $= 2 \times 2 = 4 \, \text{sq m}$

Area of figure 3 ($OFNG$) $= 6 \times 2 = 12 \, \text{sq m}$

Area of figure 4 ($NHMI$) $= 2 \times 2 = 4 \, \text{sq m}$

Area of figure 5 ($MJKL$) $= 6 \times 2 = 12 \, \text{sq m}$

$\therefore$ Total area of figure $= 12 + 4 + 12 + 4 + 12$

$$= 44 \, \text{sq cm}$$

50. Time for studying Science $= \dfrac{3}{8}$

Time for studying English $= \dfrac{3}{8} \times \dfrac{2}{5} = \dfrac{3}{20}$

51. A coconut fruit has a inner edible part, a middle hard woody shell and an outer fibrous covering coir. The low density coir is made of woody fibres.

52. Beri-beri is a disease caused by deficiency of Vitamin B in human body; it is a non-communicable disease.

53. The rabies virus is carried by dogs. This virus lives in the saliva of dog and causes rabies.

54. Milk turning sour is a chemical change, as we do not get milk as such by any physical means.

55. The removal of top layer of the soil by wind or water is called soil erosion. High speed wind and the excess flow of water causes soil erosion.

56. Whales and dolphins are classified as mammals because they give birth to young ones and do not lay eggs like other fishes.

57. The functioning of our body and its internal organs are controlled UP by the Nervous system. Nervous system is made up by the Brain, spinal cord and nerves.

58. Fainting is a state of unconciousness/ unawareness of mind, which occurs due to lower blood supply to the brain.

59. A body floats at the surface of the water due to buoyant force in upward direction.

60. The first artificial satellite was launched by Indian scientists was named as Aryabhatta.

61. Seismologists study the occurrence of earthquake in different parts of the earth.

62. Oxygen is not a greenhouse gas, as it does not produce any heating effect in the atmosphere.

64. Agricultural activities like farming cannot be practical on mountains on large scale because on mountains, there is very thin layer of top soil; as most of the top soil flows away with rain.

65. The atmospheric conditions like temperature, humidity, wind speed, etc of a region at a particular time, forms the weather of that region.

67. Most of the grassland ecosystem are found in the temperature zones of world.

68. The sound of intensity more than 90 decible will damage the diaphram of ear of a person.

Sainik School
Entrance Exam (Class 6)
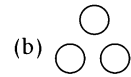# Solved Paper 2018

Time : 30 min   Marks : 50
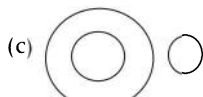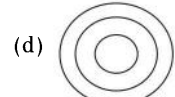
Instructions

1. This question paper contains 25 questions of 2 marks each.
2. The candidate is expected to attempt all questions.

Paper 2

Intelligence Test

1. Find the missing number in the number series given below

   20, 30, 42, ?

   (a) 64   (b) 56   (c) 62   (d) 54

2. Victory is to Joy as …… is to Sorrow.
   (a) Defeat   (b) Depression
   (c) Loneliness   (d) Cry

3. Find the missing number that has same relation to 289 as 13 has to 169.

   169 : 13 :: 289 : ?

   (a) 19   (b) 17   (c) 27   (d) 23

4. If TRAIN is written as WUDLQ, then BUS would be written as …… .
   (a) EXU   (b) DWU
   (c) EXV   (d) VXE

5. If 'Flow' is related to 'River', then 'Stagnant' is related to …… .
   (a) Pool   (b) Rain
   (c) Stream   (d) Canal

6. Choose the word which is least like the other words in the group.
   (a) Ladder   (b) Staircase
   (c) Bridge   (d) Escalator

7. If we arrange the given words in alphabetical order, which word would come at the second place, choose the correct alternative.
   (a) Plane   (b) Plain
   (c) Plenty   (d) Player

8. Choose the alternative that resembles the water image of the given word below

   A1M3b

   (a) ∀1ꟽƐ𝑞   (b) ∀I ꟽƐ𝑞
   (c) ∀IꟽƐ𝑞   (d) ∀Iꟽ£𝑞

9. Choose the word which is least like the other words in the group.
   (a) Eyes   (b) Ear
   (c) Hand   (d) Scarf

10. Choose the alternative that will continue the number series below

    2, 3, 5, 7, 11, 13, ?

    (a) 15   (b) 19
    (c) 17   (d) 21

11. Which of the following diagram indicates the best relation between Country, Nepal and India

12. Choose the alternative that will continue the number series below

$$5, 11, 19, 29, ?, 55$$

(a) 39   (b) 41   (c) 37   (d) 43

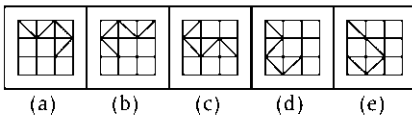**13.** A 'Fish' is to 'Gills', then a 'Man' is to ....
(a) Ear   (b) Eye
(c) Lungs   (d) Nose

14. Which figure among the five alternatives (a), (b), (c), (d) and e would replace the question mark in figure '4'?

Question Figures
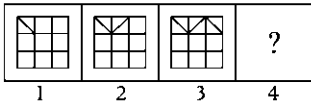
Answer Figures

15. Choose the word which is least like the other words in the group.
(a) Sun   (b) Planets
(c) Stars   (d) Satellites

16. If Maya is the only daughter of Richa's grandmother's brother, how is Maya's daughter related to Richa?
(a) Niece   (b) Cousin   (c) Aunt   (d) Mother

17. O, P, Q, R, S and T are standing on a bench according to their height. P is taller than O but shorter than S. Only S is taller than T. R is shorter than P but taller than Q. Who is the shortest?
(a) O   (b) Q
(c) P   (d) Cannot be said

18. If '+' means '÷', '×' means '−', '÷' means '+' and '−' means '×', then what would be the answer of the equation?

$$16 \div 8 \times 6 - 2 + 12 = ?$$

(a) 22   (b) 24   (c) 23   (d) 20

19. Count the number of triangles present in the given figure.
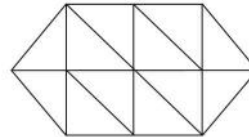
(a) 16   (b) 17
(c) 18   (d) 19

20. If 'Dog' is to 'Rabies' then 'Mosquito' is to ......
(a) Plague   (b) Death
(c) Malaria   (d) Sting

21. It is 3 O' clock in a watch and it is rotated by 10° in a manner such that if the minute hand points towards the North-East, then hour hand will point towards which direction?
(a) South   (b) South-West
(c) North-West   (d) South-East

22. 'Love' is to 'Hate', then 'Friend' is to ....
(a) Trust   (b) Companion
(c) Enemy   (d) Desire

23. If the given alpha-numeric series is seen in mirror, which alternative would resemble its mirror image?

ANS43Q12

(a) ꟼИƧꟷΟƐ1Ϩ   (b) Ϩ1ΘƐ4ƧИA
(c) ƧИAƐ4ΘϨ   (d) 1ϨW4ƐAИϨ

24. Given that A and B are a married couple. If X and Y are brothers and X is the brother of A. How is Y related to B?
(a) Brother-in-law
(b) Brother
(c) Cousin
(d) None of the above

25. If '+' means '−', '−' means '×', '×' means '÷' and '÷' means '+', then what would be the answer of the equation?
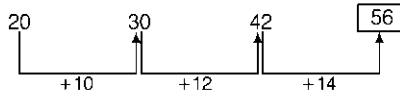
$$15 \times 5 \div 10 + 5 - 3 = ?$$

(a) 9.5   (b) 0
(c) −2   (d) 24

Answers

1	(b)	2	(a)	3	(b)	4	(c)	5	(a)	6	(c)	7	(a)	8	(c)	9	(d)	10	(c)
11	(a)	12	(b)	13	(c)	14	(a)	15	(c)	16	(b)	17	(d)	18	(c)	19	(c)	20	(c)
21	(d)	22	(c)	23	(b)	24	(a)	25	(c)										

Hints and Solutions

1. The series follows below pattern

$$\therefore \quad ? = 56$$

2. As, 'Joy' is the outcome of 'Victory', similarly 'Sorrow' is the outcome of 'Defeat'.

3. As, $\sqrt{169} = 13$
Similarly, $\sqrt{289} = \boxed{17}$

4. As,

5. In river, water is in flowing state. Similarly, in pool, it is in stagnant state.

**6.** All except bridge are used for up and down movement.

7. The alphabetical order of words is as follows.
Plain → Plane → Player → Plenty
∴ Word at second place is Plane.

8. Option (c) represents the correct water image of the given combination.

9. Except scarf, all others are different parts of a body.

10. The given series consists of continuous prime numbers. Hence, 17 will come in place of question mark (?).

11.
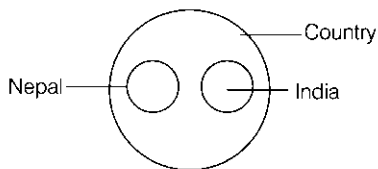
India and Nepal both are different countries.

12. The series follows below pattern
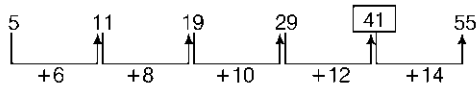
$$\therefore \quad ? = 41$$

13. Gills are the respiratory organ found in fish Similarly, lungs are the respiratory organ found in man.

14. In each successive figure a slant line (firstly, left slant line, then right slant line) is added in clockwise direction. Hence, figure in option (a) will replace the question marks (?).

15. Except stars, all others are countable.

16. The relation diagram is as follows.
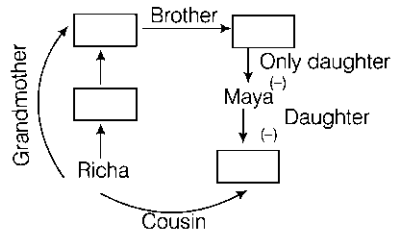
It is clear from the above diagram that Maya's daughter is the cousin of Richa.

17. According to the question,
$$S > T > P > O \qquad \dots(i)$$
$$P > R > Q \qquad \dots(ii)$$
Either O or Q is shortest.
Hence, from the given information we cannot find the shortest person.
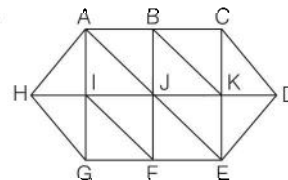
18.
$$? = 16 \div 8 \times 6 - 2 + 12$$
$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow$$
$$? = 16 + 8 - 6 \times 2 \div 12$$
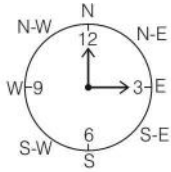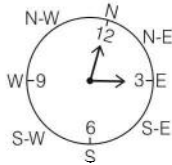$$? = 16 + 8 - 6 \times \frac{2}{12}$$
$$? = 16 + 8 - 1 = 23$$

19.

∴ Triangles = ΔAIH, ΔAIJ, ΔABJ, ΔBJK, ΔBCK, ΔCKD, ΔHIG, ΔIGF, ΔIJF, ΔJFE, ΔJKE, ΔKED, ΔAHG, ΔAHJ, ΔCDE, ΔEDJ, ΔACE and ΔAGE = 18

20. As, rabies is caused by dog. Similarly, malaria is caused by mosquito.

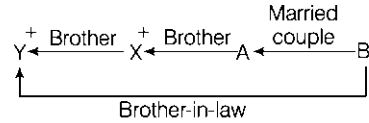**21.** Original Position,   After Rotating

Clearly, hour points towords South-East direction.

22. As, love is opposite of hate.
Similarly, friend is opposite of enemy.

23. Option (b) represents the correct mirror image of the given combination.

24. The relation diagram is as follows

Clearly, Y is the brother-in-law of B.

25. $? = 15 \times 5 \div 10 + 5 - 3$
$\quad\quad \downarrow \;\; \downarrow \;\;\; \downarrow \;\; \downarrow$
$\quad = 15 \div 5 + 10 - 5 \times 3$
$\quad = 3 + 10 - 15$
$\quad = 13 - 15 = -2$