



**QUESTION
PAPER SET**

A

Total Questions : 50

Time : 1 hr.

Guidelines for the Candidate

- You will get additional ten minutes to fill up information about yourself on the OMR Sheet, before the start of the exam.
- Write your **Name, School Code, Class, Section, Roll No.** and **Mobile Number** clearly on the **OMR Sheet** and do not forget to sign it. We will share your marks / result and other information related to SOF exams on your mobile number.
- The Question Paper comprises four sections:
Logical Reasoning (15 Questions), **Mathematical Reasoning** (20 Questions), **Everyday Mathematics** (10 Questions) and **Achievers Section** (5 Questions)
Each question in Achievers Section carries 3 marks, whereas all other questions carry 1 mark each.
- All questions are compulsory. There is no negative marking. Use of calculator is not permitted.
- There is only ONE correct answer. Choose only ONE option for an answer.
- To mark your choice of answers by darkening the circles on the OMR Sheet, use **HB Pencil** or **Blue / Black ball point pen** only. E.g.
Q. 16: Navya purchased a hand bag for ₹ 345.50, a pair of shoes for ₹ 480.25 and a cap for ₹ 75.50. How much money did she spend in all?
A. ₹ 901.25 B. ₹ 785.50 C. ₹ 895.75 D. ₹ 920.25
As the correct answer is option A, you must darken the circle corresponding to option A on the OMR Sheet. A B C D
- Rough work should be done in the blank space provided in the booklet.
- Return the OMR Sheet to the invigilator at the end of the exam.
- Please fill in your personal details in the space provided before attempting the paper.

Name:.....
SOF Olympiad Roll No.:.....
Contact No.:.....

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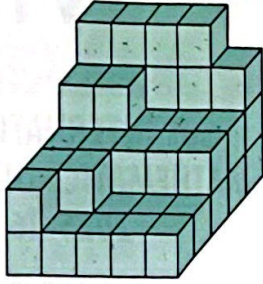
72
Countries

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Assessments

8
Olympiads

LOGICAL REASONING

- 1 Count the number of cubes in the given figure.

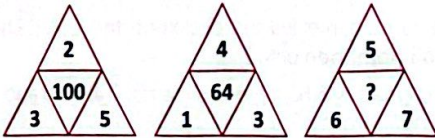


- A. 49
B. 54
C. 62
D. None of these

- 2 If yesterday was Friday, then 15th day from today will be _____.

- A. Saturday
B. Sunday
C. Tuesday
D. Monday

- 3 Find the missing number, if same rule is followed in all the three figures.



- A. 240
B. 410
C. 324
D. 225

- 4 Select the odd one out.

- A. T
B. H
C. Y
D. G

- 5 Some letters are numbered 1, 2, 3, 4, 5 and 6 as given. Arrange the given letters to form a meaningful English word and select the CORRECT option.

T A N T N E
1 2 3 4 5 6

- A. 3, 1, 2, 5, 4, 6

- B. 4, 5, 6, 1, 3, 2
C. 4, 6, 2, 3, 1, 5
D. 4, 6, 5, 2, 3, 1

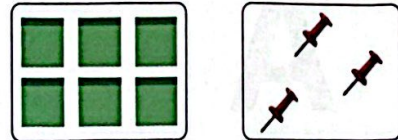
- 6 In a certain code language, if PLENTY is written as ELNPTY, then how will SURETY be written in the same code language?

- A. YUTSRE
B. USERTY
C. ERSTUY
D. TYSFUZ

- 7 Sakshi is facing towards West direction. She turns 90° anti-clockwise and then 135° clockwise. In which direction is she facing now?

- A. North
B. South-West
C. North-West
D. East

- 8 How many possible combinations of 1 sticky note and 1 board pin each can be formed from given sticky notes and board pins?



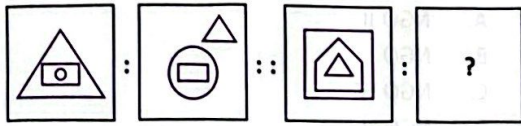
- A. 9
B. 12
C. 15
D. 18

- 9 Select the CORRECT mirror image of the given figure, if the mirror is placed vertically to the left.

PRIDE

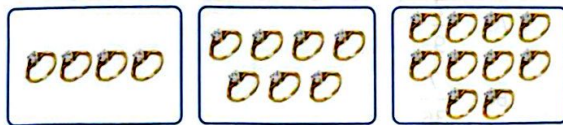
- A. EDIRP
B. EDIRE
C. EDIRP
D. EDIRP

- 10 There is a certain relationship between the pair of figures on either side of ::. Identify the relationship between the left pair and find the missing figure.



- A.
- B.
- C.
- D.

- 11 Study the given patterns carefully. What will be the number of rings in Pattern 6?



Pattern 1 Pattern 2 Pattern 3

- A. 15
B. 19
C. 22
D. 20

- 12 Divya starts doing yoga in morning from second Tuesday of September 20XX. How many days does she do yoga in that month, if she takes rest on every Saturday?

SEPTEMBER 20XX						
SUN	MON	TUE	WED	THU	FRI	SAT
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

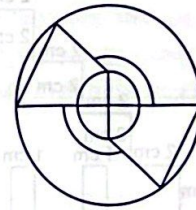
- A. 20
B. 22
C. 17
D. 18

- 13 If all the letters in the given arrangement are arranged in reverse alphabetical order, then which letter will be exactly lies in the middle?

B D K M G S Y W R V A T P J E

- A. W
B. P
C. G
D. M

- 14 Select a figure from the options which is exactly embedded in the given figure as one of its parts.



- A.
- B.
- C.
- D.

- 15 Akhil is shorter than only Shivam. Sahil is taller than Rohit but shorter than Varun. If Varun is shorter than Shivam, then who is shortest among them?

- A. Akhil
B. Rohit
C. Varun
D. Shivam

MATHEMATICAL REASONING

- 16 Which of the following options is CORRECT?

- A. $0.352 > 0.359 > 0.246 > 0.293$
B. $0.352 > 0.246 > 0.359 > 0.293$
C. $0.359 > 0.352 > 0.293 > 0.246$
D. $0.352 > 0.293 > 0.246 > 0.359$

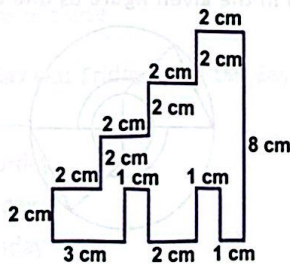
- 17 The sum of face value and place value of digit 8 in the number 31807 is represented by which Roman numeral?

- A. DCCVIII
B. DCVIII
C. DCCCVIII
D. DCCC

- 18 Which of the following has least number of distinct prime factors?
- A. 1750
 B. 1280
 C. 4410
 D. 900

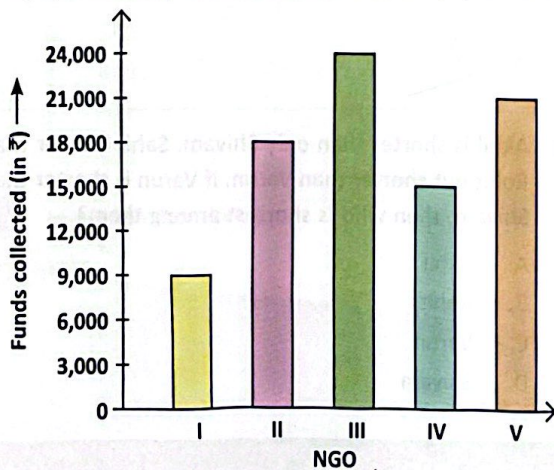
- 19 The smaller angle made by the minute hand and hour hand of a clock when it is 12 : 20 a.m. is a/an _____.
- A. Acute angle
 B. Obtuse angle
 C. Reflex angle
 D. Straight angle

- 20 Find the perimeter of the given figure (not drawn to scale).



- A. 48 cm
 B. 24 cm
 C. 36 cm
 D. 40 cm

DIRECTIONS (21–22) : The given bar graph shows the funds raised by different NGOs for child education. Study the given bar graph carefully and answer the following questions.



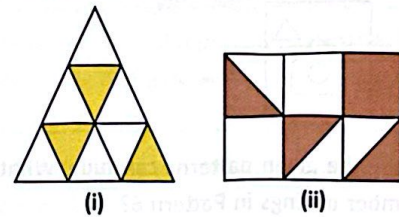
- 21 How many NGOs collected more than ₹ 15,000?
- A. 1
 B. 2
 C. 3
 D. 4

- 22 Which NGO collected an amount equal to $\frac{3}{4}$ of what NGO III collected?

- A. NGO II
 B. NGO I
 C. NGO IV
 D. NGO V

- 23 Which of the following options is INCORRECT?
- A. Sum of successor and predecessor of a number is twice of that number.
 B. Difference of successor and predecessor of a number is always 2.
 C. Successor of a number is either greater or equal to the number.
 D. All of these

- 24 Find the product of shaded fraction of figure (i) and unshaded fraction of figure (ii).



- A. $\frac{2}{9}$
 B. $\frac{7}{36}$
 C. $\frac{3}{17}$
 D. None of these




- 25 If $P = 200 + 50 + 7 + \frac{1}{100} + \frac{2}{1000}$ and $Q = 500 + 10 + \frac{7}{10} + \frac{2}{100} + \frac{3}{1000}$, then the value of $Q - P$ is _____.
- A. 253.711
 B. 311.250
 C. 217.179
 D. None of these

- 26 The area of a square and rectangle are equal. If the side of square is 18 cm and length of rectangle is 27 cm, then which has more perimeter?
- A. Square
 B. Rectangle
 C. Both have same perimeter
 D. Can't say

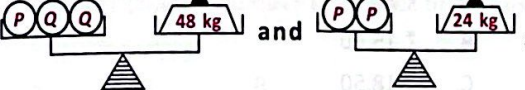
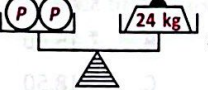
- 27 Which of the following shapes has minimum 3 lines of symmetry?



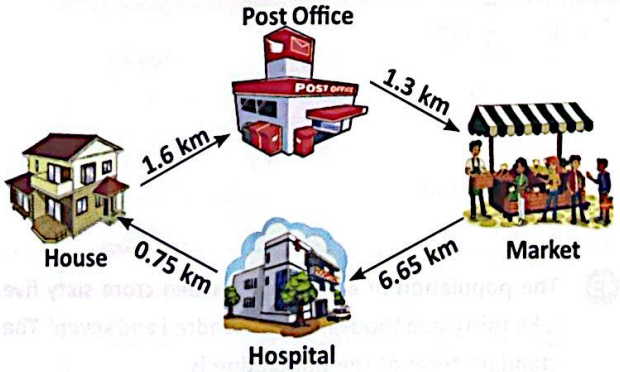
- A.

- B. 
- C. 
- D. 

- 28 Which of the following options is CORRECT?
- A. 14 tenths 4 thousandths = 0.144
- B. 2 tenths 13 hundredths = 0.213
- C. 4 hundredths 2 tenths = 0.024
- D. 7 tenths 17 hundredths = 0.87

- 29 If  and ,
- then which of the following options is true?
- A. P is heavier than Q
- B. Q is heavier than P
- C. P and Q are of equal weights.
- D. None of these

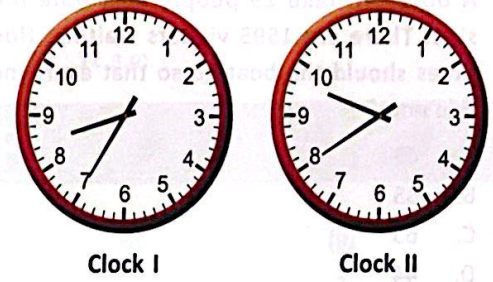
- 30 Rohan cycled from his house to the post office, then to the market, then to the hospital and then he went to his house. The distances are marked in the given figure. What is the total distance covered by Rohan?



- A. 12.5 km
- B. 11.4 km
- C. 9.53 km
- D. 10.3 km

- 31 The number of books in a library when rounded off to nearest hundreds gives 18500. Which of the following cannot be the actual number of books in the library?
- A. 18499
- B. 18478
- C. 18415
- D. 18468

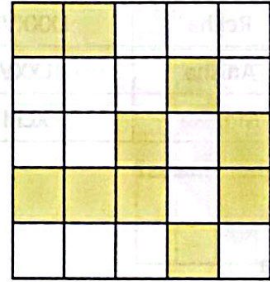
- 32 If the clock I is 20 minutes slow and clock II is 15 minutes fast, then the difference between their actual time is _____.



- A. 35 minutes
- B. 30 minutes
- C. 25 minutes
- D. 45 minutes

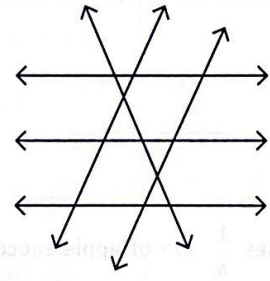
- 33 The difference between the greatest and smallest 5-digit numbers formed by using the digits 3, 1, 0, 2 and 8 (using each digit only once) is
- A. 10238
- B. 72038
- C. 72972
- D. 62734

- 34 How many line(s) of symmetry does the given figure have?



- A. 0
- B. 1
- C. 2
- D. 4

- 35 How many pair(s) of intersecting lines is/are there in the given figure?



- A. 10
- B. 11
- C. 12
- D. None of these

- 36 A boat can take 29 people at a time for a lake side. There are 1595 visitors waiting. How many times should the boat go so that everyone gets a ride once?
- A. 45
B. 55
C. 65
D. 44

- 37 A rectangular park is 165 m long and 105 m wide. If Sia walks around the park 7 times, then how much total distance does she cover?
- A. 4 km 120 m
B. 3 km 780 m
C. 3 km 540 m
D. 2 km 980 m

- 38 The given table shows the number of marks got by four friends in an examination.

Friends	Marks obtained
Lata	LIV
Rekha	LXXXVIII
Anisha	LXXV
Monika	XCIII

Who got highest marks?

- A. Anisha
B. Monika
C. Lata
D. Rekha
- 39 Some triangular mats with sides 15 cm, 20 cm and 25 cm were decorated along its boundary with colourful ribbons costing ₹ 50 per meter. If the total cost is ₹ 1500, then how many mats were decorated?
- A. 60
B. 90
C. 30
D. 50
- 40 Vinita uses $\frac{1}{4}$ cup of apple sauce in place of every $\frac{1}{3}$ cup of butter in her cookie recipe. What is the quantity of apple sauce will Vinita use in place of 1 cup of butter?

- A. $\frac{1}{12}$ cup
B. $\frac{1}{7}$ cup
C. $\frac{2}{4}$ cup
D. $\frac{3}{4}$ cup

- 41 Nisha has ₹ 125.80. She gives ₹ 35.25 to each of her two cousins and ₹ 40 to her brother. How much money is left with her?
- A. ₹ 12
B. ₹ 15.30
C. ₹ 18.50
D. None of these

- 42 Tanvi got a diet plan by a dietician to drink $1\frac{1}{4}$ litres milk everyday for a week, but she drank $\frac{7}{8}$ litres milk daily. How much less milk did she consume in a week as per the diet?
- A. $\frac{3}{4}$ litre
B. $\frac{7}{8}$ litre
C. $2\frac{5}{8}$ litres
D. $1\frac{7}{8}$ litres

- 43 The population of a state is 'thirteen crore sixty five lakh thirty two thousand two hundred and seven'. The standard form of the population is _____.
- A. 13,66,13,400
B. 13,65,23,200
C. 13,65,32,207
D. 13,65,23,217

- 44 The height of a study table is twice the height of a chair. If the height of chair is 2 m 50 cm, then what is the total height of both chair and study table?
- A. 620 cm
B. 700 cm

- C. 680 cm
D. 750 cm

- 45 Two lights flash at an intervals of 18 minutes and 24 minutes. If they flash together at 9:00 a.m., then when will the next time they flash together?

- A. 9 : 56 a.m.
B. 9 : 36 a.m.
C. 9 : 42 a.m.
D. 10 : 12 a.m.








ACHIEVERS SECTION

- 46 Fill in the blanks and select the CORRECT option.

- (i) H.C.F of 24, 56 and 72 is P.
(ii) There is/are Q prime factor(s) of a prime number.
(iii) There are R common multiples of 15 and 25 lies between 100 and 500.
(iv) The sum of MCMXII and DCCXCIX, when rounded off each number to nearest hundreds, is S.

	P	Q	R	S
A.	12	1	4	2800
B.	8	2	3	2600
C.	16	1	2	2700
D.	8	1	5	2700

- 47 The given pictograph shows the total number of flowers picked by five friends in a week. Study the given pictograph carefully and answer the following questions.

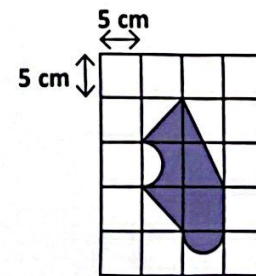
Friends	Number of flowers
Deepti	
Shivangi	
Niharika	
Devika	
Rihanna	
Key :  = 60 flowers and  = 30 flowers	

- (i) Which two friends collected a total of 690 flowers?
(ii) Find the fraction of total number of flowers picked by Deepti and Niharika together to the total number of flowers picked by Shivangi and Rihanna together.

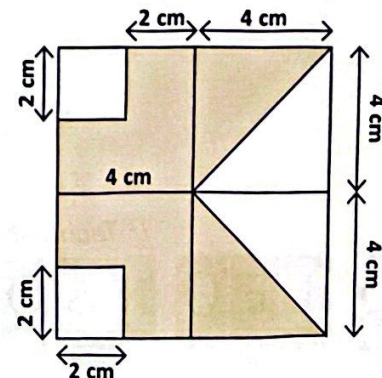
- (i)
A. Deepti and Niharika
B. Deepti and Devika
C. Shivangi and Niharika
D. Shivangi and Rihanna
- (ii)
 $\frac{2}{3}$
 $\frac{3}{2}$
 $\frac{1}{5}$
 $\frac{3}{2}$

- 48 Read the given statements carefully and select the CORRECT option.

Statement-1 : The area of shaded part of the given figure is 125 sq. cm.



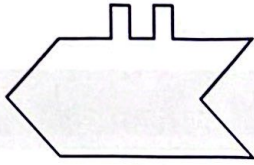
Statement-2 : The area of the shaded part of the given figure (not drawn to scale) is 40 sq. cm.



- A. Both Statement-1 and Statement-2 are true.
B. Both Statement-1 and Statement-2 are false.
C. Statement-1 is true but Statement-2 is false.
D. Statement-1 is false but Statement-2 is true.

49 Solve the following and select the CORRECT option.

(i) Find the difference between the number of right angles and the number of acute angles inside the given figure.



(ii) The difference between the larger and smaller angle formed between the hands of a clock at 3'O clock is a _____.

- | | |
|------|----------------|
| (i) | (ii) |
| A. 2 | Right angle |
| B. 3 | Straight angle |
| C. 2 | Reflex angle |
| D. 1 | Straight angle |

50 Match the following and select the CORRECT option.

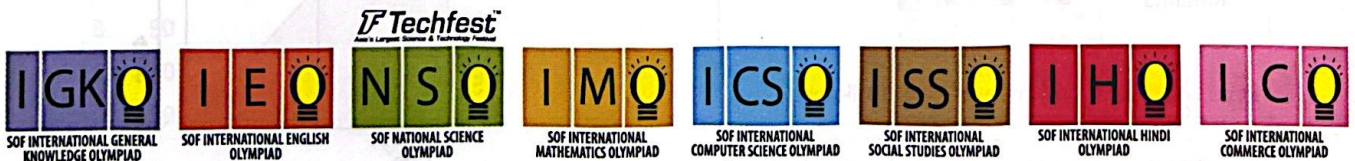
Column I

Column II

- | | |
|--|------------|
| (P) Number of millions in 50 crores is _____. | (i) 112500 |
| (Q) The successor of predecessor of DCCXCVII is _____. | (ii) 10000 |
| (R) $100 \text{ thousands} + 100 \text{ hundreds} + 250 \text{ tens} =$ _____. | (iii) 797 |
| (S) The place value of digit 1 in the smallest 5 digit number formed by using the digits 0, 2, 5, 1 (using each digit at least once) is _____. | (iv) 500 |

- A (P)-(ii), (Q)-(iv), (R)-(i), (S)-(iii)
 B. (P)-(iv), (Q)-(iii), (R)-(i), (S)-(ii)
 C. (P)-(iii), (Q)-(i), (R)-(iv), (S)-(ii)
 D. (P)-(iv), (Q)-(i), (R)-(ii), (S)-(iii)

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