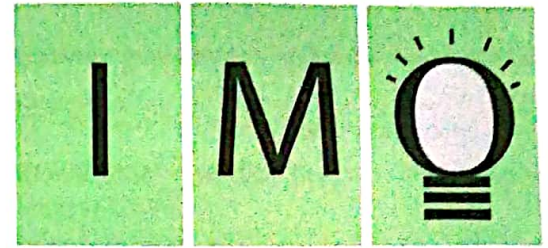


CLASS
5

LEVEL
2

QUESTION PAPER SET
B



**SOF INTERNATIONAL
MATHEMATICS OLYMPIAD
2018-19**

DO NOT OPEN THIS BOOKLET UNTIL ASKED TO DO SO

Total Questions: 50 | Time: 1 hr.

Guidelines for the Candidate

1. You will get additional ten minutes to fill up information about yourself on the OMR Sheet, before the start of the exam.
2. Write your **Name, School Code, Class, Section** and **Roll No.** clearly on the **OMR Sheet** and do not forget to sign it.
3. In the school code column in the OMR Sheet, please fill in code allocated to your school and not the exam center code.
4. The Question Paper comprises two sections : **Mathematics** Section (45 Questions) and **Achievers Section** (5 Questions).
Each question in Achievers Section carries 3 marks, whereas all other questions carry one mark each.
5. All questions are compulsory. There is no negative marking. Use of calculator is not permitted.
6. There is only ONE correct answer. Choose only ONE option for an answer.
7. 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: Rahul bought 4 kg 90 g of apples, 2 kg 60 g of grapes and 5 kg 300 g of mangoes. The total weight of all the fruits he bought is_____.

A. 11.450 kg

B. 11.000 kg

C. 11.350 kg

D. 11.250 kg

As the correct answer is option A, you must darken the circle corresponding to option A on the OMR Sheet.

16. ● (B) (C) (D)

8. Rough work should be done in the blank space provided in this booklet.
9. Please fill in your personal details in the space provided on this page before attempting the paper.
10. **RETURN THE OMR SHEET AND QUESTION PAPER TO THE INVIGILATOR AT THE END OF THE EXAM.**



Name:.....

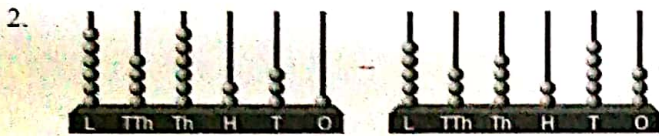
Section:..... SOF Olympiad Roll No.:..... Contact No.:.....

MATHEMATICS

1. Which of the following options makes the given expression true?

$$102536 + 325012 - 52500 \square 205236 + 152121 - 72500$$

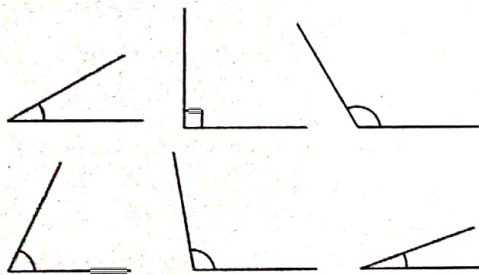
- A. $>$
 B. $=$
 C. $<$
 D. Can't be determined



= _____.

- A. 1,21,320
 B. 1,11,978
 C. 1,21,978
 D. 1,20,321

3. How many of the given figures have acute angles?



- A. None
 B. Two
 C. Three
 D. More than three

4. What is the minimum number of squares that must be added in the figure so that PQ becomes a line of symmetry?



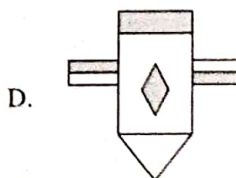
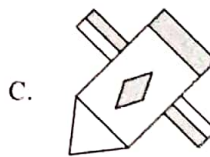
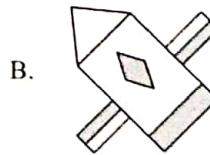
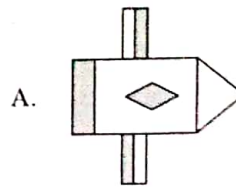
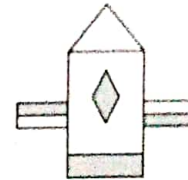
- A. 5
 B. 8
 C. 7
 D. 9

5. Select the correct match.

- A. CDXLIX - 649
 B. MMDCL - 2650

- C. DCXLV - 640
 D. MCLVI - 1250

6. Which of the following figures shows the $3\frac{1}{4}$ clockwise rotation of the given figure?



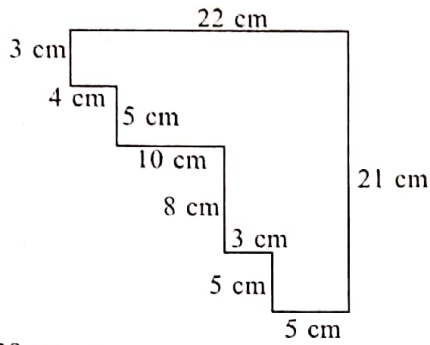
7. Which of the following numbers are arranged in ascending order?

- A. 0.5, 0.06, 2.2, 3.25
 B. 0.02, 3.04, 4.02, 3.52
 C. 0.20, 1.25, 2.12, 2.62
 D. 5.20, 4.13, 3.25, 1.20

8. Find the difference between the greatest and the smallest 7-digit numbers formed by using the digits 2, 1, 0, 3, 5. (Each digit should be used at least once)

- A. 5260325
 B. 4552975
 C. 4320765
 D. 3251260

9. Find the area of the given figure (not drawn to scale).



- A. 238 sq. cm
 B. 245 sq. cm
 C. 312 sq. cm
 D. 315 sq. cm
10. Dhavi works 32 hours in five days from Monday to Friday. She worked $4\frac{1}{2}$ hours on Monday, 8 hours on Tuesday and $3\frac{1}{2}$ hours on Wednesday. How many hours did she work on Thursday and Friday together?

- A. $12\frac{1}{2}$ hours
 B. 16 hours
 C. $13\frac{1}{2}$ hours
 D. 15 hours

11. The temperature outside the room is 19°C less than the temperature inside the room. If the temperature inside the room is shown here, then find the temperature outside the room.



- A. 32°C
 B. 7°C
 C. 45°C
 D. 26°C
12. A tea plucker plucked tea leaves on three successive days. If he plucked 2,12,350 tea leaves on Monday, 3,12,250 on Tuesday and 1,23,520 on Wednesday, then how many tea leaves were plucked in all during the three days?

- A. 3,291,60
 B. 6,48,120
 C. 4,28,120
 D. 5,23,610

13. A Fitness Club advises every person to drink $3\frac{1}{4}$ L of water in the morning, $1\frac{1}{2}$ L of water in the afternoon and $\frac{3}{4}$ L of water before going to bed. How much water should a person drink during the day according to the Fitness Club?

- A. 6 L
 B. $4\frac{1}{4}$ L
 C. $5\frac{1}{2}$ L
 D. $5\frac{1}{4}$ L

14. Shruti, Kirti and Priya have ₹ 10250 altogether. If Shruti has ₹ 1100 less than Kirti and Kirti has ₹ 1400 more than Priya, then how much money Shruti have?

- A. ₹ 1250
 B. ₹ 2520
 C. ₹ 3150
 D. ₹ 4200

15. The difference between 42250 and 31125 rounded off to the nearest thousands is

- A. 13000
 B. 11000
 C. 12000
 D. 11125

16. How many letters of the given word have at least one line of symmetry?

CREATIVE

- A. 3
 B. 6
 C. 8
 D. None of these

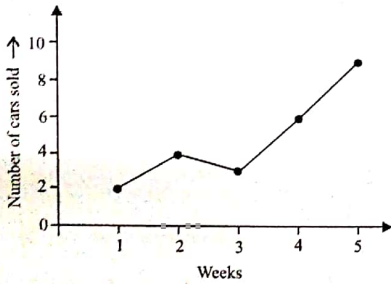
17. An empty basket weighs 1 kg 250 g. Karan put some balls of weight 75 g each. Now, the total weight of the basket is 2 kg 150 g. How many balls did Karan put in the basket?

- A. 10
 B. 15
 C. 12
 D. 18

18. Subtract 84 hundredths from the product of 3.12 and 7. The resultant number obtained is _____.

- A. 21
 B. 18.02
 C. 22.04
 D. 30.05

19. The line graph given below shows the number of cars Jatin sold over the past 5 weeks.



If he got ₹ 20000 for every car sold, then what is the total amount he made over the past 5 weeks?

- A. ₹ 280000
 B. ₹ 240000
 C. ₹ 480000
 D. ₹ 500000
20. The length of a rectangle is $\frac{3}{2}$ times of its breadth. If its perimeter is 120 m, then find its area.

- A. 3456 sq. m
 B. 864 sq. m
 C. 748 sq. m
 D. 1240 sq. m

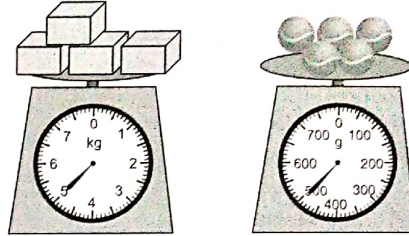
Direction (21-22) : The given pictograph shows the number of vehicles parked in a parking area. Study the pictograph carefully and answer the following questions.

Bike	
Car	
Scooter	
Jeep	
Each denotes 10 vehicles.	

21. How many more bikes were parked than the total number of scooters and jeeps parked together?
- A. 10
 B. 20
 C. 30
 D. 15
22. What is the fraction of the total number of cars to the total number of vehicles parked?
- A. $\frac{8}{17}$
 B. $\frac{5}{17}$

- C. $\frac{8}{11}$
 D. $\frac{9}{11}$

23. Study the given balances carefully and answer the question that follows.



Find the weight of 2 + 2 .

- A. 1 kg 350 g
 B. 1 kg 450 g
 C. 2 kg 700 g
 D. 700 g
24. In 232450, the place value of 2 in the lakhs place is _____ times the place value of 2 in the thousands place.
- A. 2
 B. 1000
 C. 10
 D. 100
25. Which of these could be solved by using the sentence 'A - 5'?
- A. Ishan is 5 times as old as Sanjit. If A is Sanjit's age in years, then how old is Ishan?
 B. Tarun is 5 years younger than Anny. If A is Anny's age in years, then how old is Tarun?
 C. Naman is one-fifth as old as Aman. If A is Naman's age in years, then how old is Aman?
 D. Geet is 5 years older than Suhana. If A is Suhana's age in years, then how old is Geet?

26. Which of the following is incorrect?

- A. $5 + \frac{3}{100} + \frac{2}{10} = 5.23$
 B. $0.2 \times 1000 = 200$
 C. $0.05 + 8.20 - 0.03 = 8.02$
 D. All of these

27. A person can paint a wall in 45 minutes. How many such walls can he paint in 9 hours?

- A. 8
 B. 10
 C. 12
 D. 15

28. The given difference is



- A. 1.5 cm
 B. 0.5 cm
 C. 2.5 cm
 D. 2 cm

29. Select a pair of same perimeter

- A. L and M
 B. M and O
 C. L and N
 D. N and O

30. Kapil has a wire and cut length of each

- A. 14 m
 B. 15 m
 C. 16 m
 D. 24 m

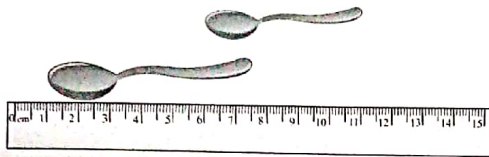
31. Three tanks A, B and C contain 59 L of oil is there

- A. 85 L
 B. 81 L
 C. 72 L
 D. 89 L

32. The given table

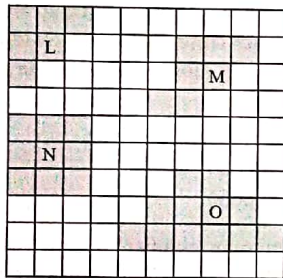
Str
St
Sa
S
Sa
Sa

28. The given figure shows two spoons. What is the difference in length of both the spoons?



- A. 1.5 cm
B. 0.5 cm
C. 2.5 cm
D. 2 cm

29. Select a pair from the given shapes which has the same perimeter.



- A. L and M
B. M and O
C. L and N
D. N and O

30. Kapil has a wire 90 m long. He cut $\frac{1}{3}$ of the total wire and cut the rest into 4 equal pieces. Find the length of each of four pieces.

- A. 14 m
B. 15 m
C. 16 m
D. 24 m

31. Three tanks A, B and C contains 291 L of oil altogether. Tank A contains twice as much oil as Tank B. Tank C contains 59 L less oil than Tank A. How much quantity of oil is there in Tank C?

- A. 85 L
B. 81 L
C. 72 L
D. 89 L

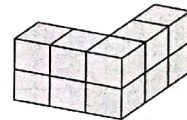
32. The given table shows the height of five students.

Students	Height (in cm)
Shreya	120.5
Sanchi	145
Sumit	150.5
Saurav	130
Saransh	?

If the total height of all the five students is 6 m 71 cm, then find the height of Saransh.

- A. 123.5 cm
B. 121 cm
C. 125 cm
D. 118 cm

33. Find the number of unit cubes in the given figure.



- A. 8
B. 10
C. 12
D. 9

34. The LCM and HCF of 24, 36 and 40 respectively are

- A. 360, 4
B. 360, 12
C. 180, 4
D. 180, 12

35. How many straight angles and right angles are there in 5 complete turns?

- A. 10, 10
B. 10, 20
C. 18, 12
D. 12, 15

36. Priyansh wants to buy a bike costs ₹ 64500. If he has ₹ 15000 and he saves ₹ 1500 every month, then how many months does he need to save in order to pay for the bike?

- A. 43
B. 40
C. 42
D. 33

37. What is the value of $212920 - 102580 \times 0 + 20000 \div 2$?

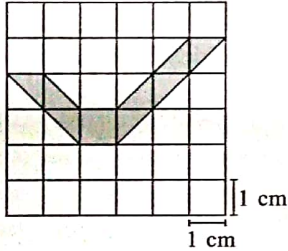
- A. 222920
B. 0
C. 112920
D. 1

38. A number exceeds 4232180 by 30500. Find one-fourth of the number.

- A. 1065670
B. 4262680
C. 3245320
D. None of these

39. Select the incorrect option.
- A. Greatest factor of a number is the number itself.
 - B. 2 and 3 are consecutive prime numbers.
 - C. The smallest prime number is 1.
 - D. 1 is the factor of every number.

40. Find the area of the shaded region.



- A. 7 sq. cm
- B. 5 sq. cm
- C. 6 sq. cm
- D. None of these

41. A factory produces 803162 bulbs in a particular month. Next month, it produces 8562 less bulbs than the previous month. Find the total bulbs produced by the factory in both the months.

- A. 811724
- B. 794600
- C. 1597762
- D. 1606324

42. Add the 5th multiple of 12 and 7th multiple of 15. The value obtained is 435 less than X. Find X.

- A. 600
- B. 400
- C. 200
- D. 500

43. If 6 pieces of ribbon costs ₹ 73.80, then what is the price of 19 such ribbons?

- A. ₹ 120
- B. ₹ 233.70
- C. ₹ 200
- D. ₹ 157.30

44. A school is organising a 3-day trip to Thailand at ₹ 25000 per child. Out of 45 children, 20 opt to go. Find the total money collected for the trip.

- A. ₹ 450000
- B. ₹ 900000
- C. ₹ 500000
- D. ₹ 480000

45. The minimum number of match sticks that can be required to write 27 in roman number system is _____.

- A. 8
- B. 7
- C. 6
- D. 5

ACHIEVERS SECTION

46. Match the following and select the correct option.

Column I

Column II

- | | |
|---|----------|
| (i) 19 hundredths less than 27.6 is _____ more than 27. | (p) 3047 |
| (ii) Subtract 3032.5 from the product of 289.5 and 21. | (q) 0.41 |
| (iii) The quotient when 64464 is divided by 16 is | (r) 4029 |

- A. (i) → (q); (ii) → (r); (iii) → (p)
- B. (i) → (p); (ii) → (q); (iii) → (r)
- C. (i) → (q); (ii) → (p); (iii) → (r)
- D. (i) → (r); (ii) → (q); (iii) → (p)

47. Read the statements carefully and select the correct option.

Statement-I : If carpet is laid on the floor of a room 10 m by 6 m, leaving a border 1 m wide all around it, then the perimeter of the carpet is 24 m.

Statement-II : The perimeter of a rectangle is 12 cm.

If the measure of length is $\frac{3}{2}$ cm more than its breadth, then the breadth of the rectangle is 2.25 cm.

- A. Both Statement-I and Statement-II are true.
- B. Statement-I is true but Statement-II is false.
- C. Statement-I is false but Statement-II is true.
- D. Both Statement-I and Statement-II are false.

48. On a particular Sunday, a coffee shop sold the following items.

Items	Number of cups sold
Tea	320
Coffee	450

The cost of a cup of coffee is twice the cost of a cup of tea. If the total amount earned by the shop owner is ₹ 12200, then the cost of one cup of tea and one cup of coffee respectively are

- A. ₹ 10, ₹ 20
- B. ₹ 13, ₹ 26

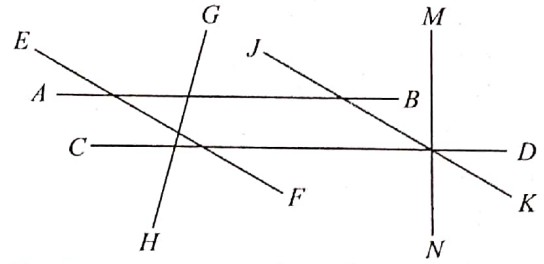
- C. ₹ 15, ₹ 30
D. ₹ 20, ₹ 40

49. Aanya is thinking of a five digit number.
- Its tens digit is the smallest prime number.
 - Its ones digit is twice the hundreds digit.
 - When ten thousands digit is divided by tens digits, the quotient is 3.
 - Its hundreds digit is three less than the ten thousands digit.
 - Its thousands digit is the largest one digit odd number.

Find the number Aanya is thinking of.

- A. 39210
B. 39020
C. 69326
D. 69236

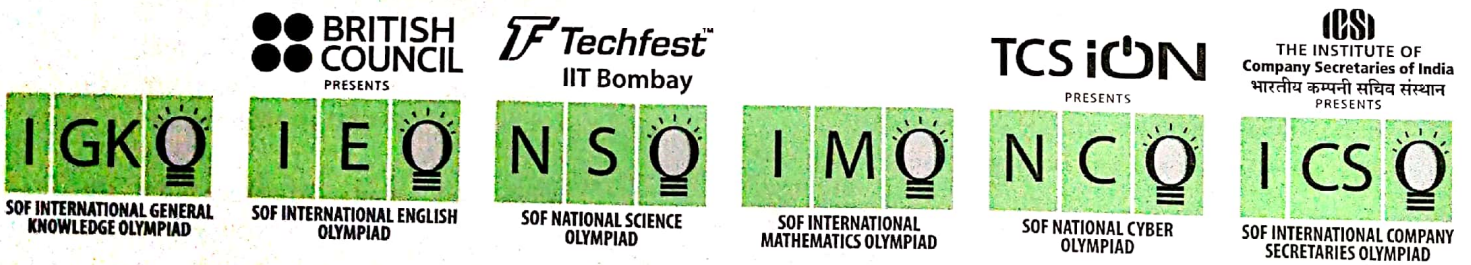
50. Study the given figure carefully and fill in the blanks.



- (i) Number of pairs of parallel lines are (P).
(ii) Number of pairs of perpendicular lines are (Q).
(iii) There are (R) lines which are intersecting with AB .
- | | (P) | (Q) | (R) |
|----|-----|-----|-------|
| A. | Two | Two | Three |
| B. | Two | One | Three |
| C. | One | Two | Two |
| D. | One | One | Two |

SPACE FOR ROUGH WORK

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