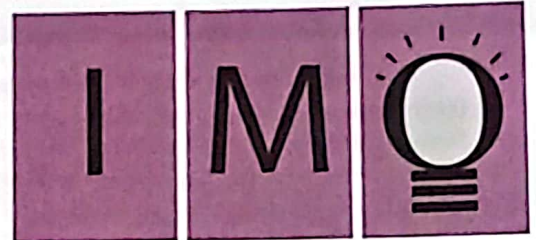# CLASS 5

QUESTION PAPER SET **A**

IMO

SOF INTERNATIONAL MATHEMATICS OLYMPIAD 2022-23

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, Roll No.** and **Mobile Number** clearly on the **OMR Sheet** and do not forget to sign it. We w 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) a **Achievers Section** (5 Questions)

   Each question in Achievers Section carries 3 marks, whereas all other questions carry one 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: 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 bou 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. ● Ⓑ Ⓒ Ⓓ

   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 on this page before attempting the paper.

SOF
SCIENCE OLYMPIAD FOUNDATION
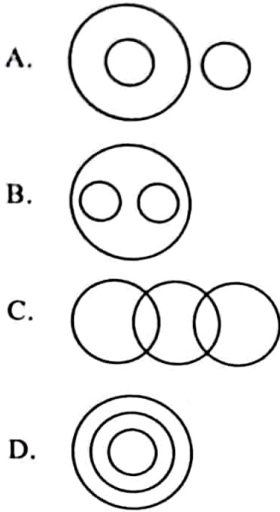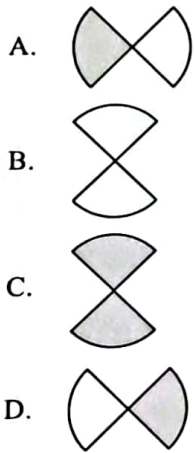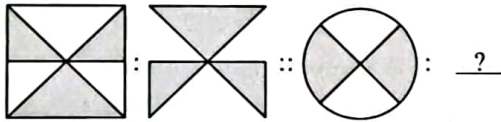Inspiring Young Minds Through Knowledge Olympiads

Name:..

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

1. Which of the following Venn diagrams best represents the relationship amongst, "Dogs, Men and Living beings"?

   A.

   B.

   C.

   D.

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

   A.

   B.

   C.

   D.

3. Find the missing number in the given number pattern.

   144, 136, 128, _?_, 112, 104, 96

   A. 120
   B. 122
   C. 118
   D. 116

4. Rohan is standing fourth from the front in a queue. Chintu is standing eighth from the last. If there are only four people standing between Rohan and Chintu, then find the total number of people in the queue.
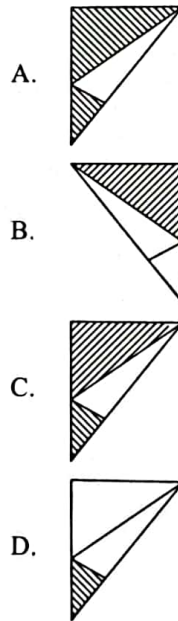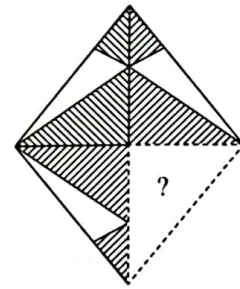
   A. 15
   B. 16
   C. 14
   D. 12

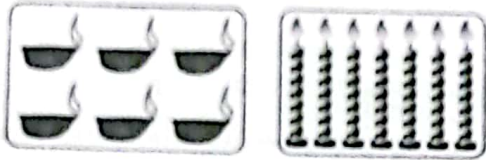5. Select the odd one out.

   A. JJ20
   B. RR36
   C. MM26
   D. KK24

6. Which of the following options will complete the given figure pattern?

   A.

   B.

   C.

   D.

7. In a certain code language, ENGLISH is coded as #$%*!&÷ and BATTING is coded as @©++!$%. How will BANGLE be coded in the same code language?
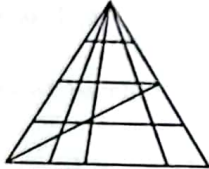
   A. @©$%*#
   B. @©!$*#
   C. @*+%$!
   D. ©@$*%#

8. How many different possible combinations of 1 diya and 1 candle each can be formed from the given diyas and candles?

A. 48
B. 40
C. 42
D. 36

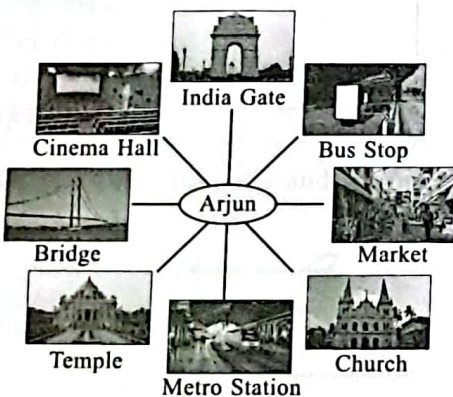9. How many minimum number of straight lines are required to draw the given figure?

A. 12
B. 10
C. 11
D. 8

10. Yuvraj joins a Badminton coaching centre on 1st April 20XX. If every Thursday and Friday is a holiday, then for how many days did he go for coaching in that month?

APRIL 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. 23
C. 21
D. 22

11. If Arjun is facing the India Gate, then what will he be facing if he turns 135° anti-clockwise and then 180° clockwise?
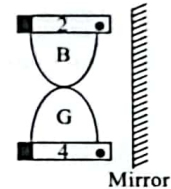

A. Bus Stop
B. Temple
C. Market
D. Bridge

12. Which of the following words cannot be formed from the letters of the given word?
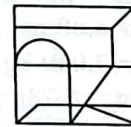
INSTITUTIONAL

A. UNION
B. INSULT
C. NATION
D. TUNNEL

13. Select the correct mirror image of the given figure.

14. Which of the following options is exactly embedded in the given figure as one of its parts?

15. If the six elements from the left end are removed from the given arrangement, then which element will be at the middle of the remaining elements?

I @ B 7 T # % 4 K M S E 8 A C
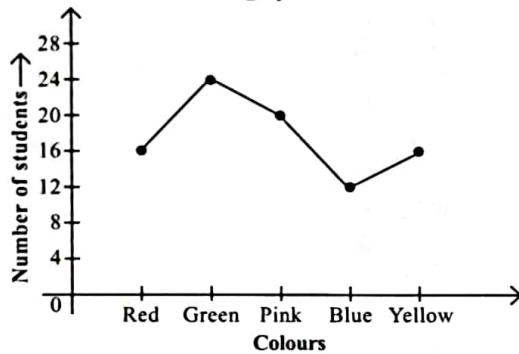
- A. M
- B. S
- C. E
- D. 8

MATHEMATICAL REASONING

16. Which of the following is the equivalent fraction of $\frac{3}{8}$?

- A. $\frac{9}{18}$
- B. $\frac{15}{25}$
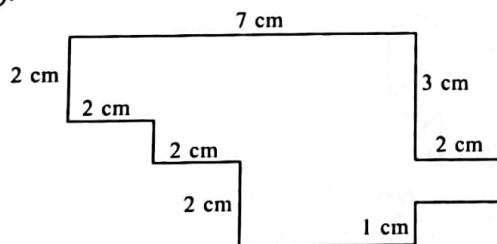- C. $\frac{12}{20}$
- D. $\frac{12}{32}$

17. The given line graph shows the number of students who like different colours. Study the graph carefully and answer the following question.

How many more students like green colour than blue colour?

- A. 14
- B. 12
- C. 10
- D. 8

18. Which of the following is incorrect?

- A. 4 L 360 mL = 4.36 L
- B. 6 m 8 cm = 6.80 m
- C. 7 kg 40 g = 7.040 kg
- D. 8 km 738 m = 8.738 km

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

- A. 33 cm
- B. 24 cm
- C. 28 cm
- D. 36 cm

20. Find the greatest 4-digit number that can be formed by using the given digits each only once.

5, 7, 0, 8

- A. 8507
- B. 8750
- C. 8705
- D. 8570
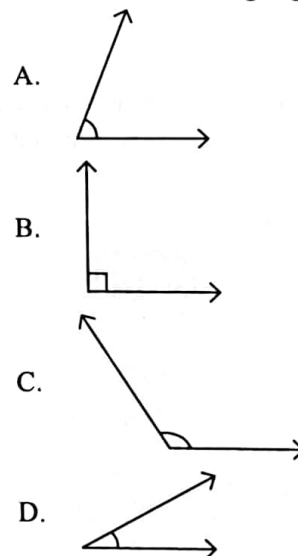
21. The highest common factor of 56 and 184 is

- A. 8
- B. 12
- C. 7
- D. 16

22. The given clock shows the time at which Shreya went for jogging in the morning from her home. If she came back at 8 : 30 a.m., then for how much time did she jog?

- A. 80 mins
- B. 60 mins
- C. 75 mins
- D. 90 mins

23. Which of the following angles represents an obtuse angle?

CamScanner

24. Identify the number.
- It is a 3-digit number.
- All of its digits are different.
- The sum of all of its digits is 15.
- The tens digit is three times the ones digit.

    A. 651
    B. 762
    C. 564
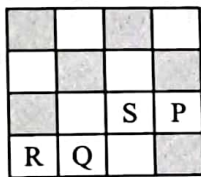   D. 726

25. The roman numeral for 967 is _____.

    A. CMLXVII
    B. MCLXVII
    C. CMLXII
    D. MCLXII

26. How many pairs of parallel lines are there in the given figure?

    A. 4
    B. 8
    C. 6
    D. None of these

27. Which of the following squares must be shaded to make the given figure symmetric?
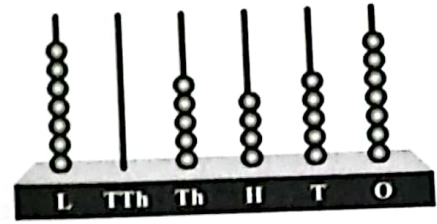

    A. P
    B. Q
    C. R
    D. S

28. A milk container can hold $14\frac{3}{5}$ litres of milk. How much milk 10 such containers can hold?

    A. 148 litres
    B. 136 litres
    C. 146 litres
    D. 134 litres

29. The sum of 3rd multiple of 3 and 5th multiple of 5 is divisible by _____.

    A. 5
    B. 3
    C. 4
    D. 2

30. Rounding off the number shown on the abacus to the nearest hundreds place gives _____.

    A. 705000
    B. 705400
    C. 705500
    D. 706000

31. The temperature shown in the given thermometer is _____.
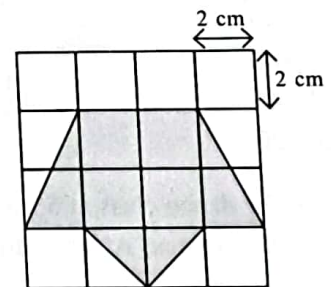

    A. 45°F
    B. 85°F
    C. 55°F
    D. 105°F

32. What is the value of $(825.23 + 425.68)$ when rounded off to nearest tenths?

    A. 1236.5
    B. 1251
    C. 1250.9
    D. 1252.2

33. Find the area of the shaded figure.

    A. 32 sq. cm
    B. 24 sq. cm
    C. 28 sq. cm
    D. 36 sq. cm

34. A pole is painted red and white. The red portion is 1.8 m long and the white portion is three times as long as the red portion. How long is the pole?
   A. 5.4 m
   B. 7.2 m
   C. 3.6 m
   D. None of these

35. Sixty million fifty seven thousand four hundred three will be written as _____.
   A. 60,057,403
   B. 60,570,403
   C. 60,574,030
   D. 60,057,430

EVERYDAY MATHEMATICS

36. The cost of a notebook is ₹ 12. How many maximum number of notebooks can be purchased with a ₹ 200 note?
   A. 16
   B. 18
   C. 14
   D. 20

37. In a school, the number of girls is $\frac{3}{4}$ of the total students. If total number of students in the school is 320, then find the number of boys in the school.
   A. 160
   B. 90
   C. 80
   D. 120

38. A farmer planted sugarcane in a rectangular plot of 266 sq. m area. If breadth of the plot is 14 m, then find its length.
   A. 23 m
   B. 21 m
   C. 13 m
   D. 19 m

39. A sweet shop sells 248 rasgullas every day. If the cost of 1 rasgulla is ₹ 12, then how much amount will the shop earn in 5 days?
   A. ₹ 14,880
   B. ₹ 23,540
   C. ₹ 12,540
   D. ₹ 26,320

40. Rehan went for dance class at 5:30 a.m. He returned home after 45 minutes. At what time did he return home?
   A. 5:45 a.m.
   B. 6:15 a.m.
   C. 6:30 a.m.
   D. 6.45 a.m.

41. NGO P collected 72,53,052 books and NGO Q collected 45,56,759 books at a charity drive. Which NGO collected more number of books?
   A. NGO Q
   B. NGO P
   C. Both collected equal books
   D. Can't be determined

42. Karan walks around a square park whose side is 50 m. One day he walked around the park 6 times. How much distance did he walk on that day?
   A. 1450 m
   B. 1500 m
   C. 1800 m
   D. 1200 m

43. Aarohi's weight is 67.50 kg and her friend Shreya's weight is 54.85 kg. How much weight should Aarohi lose so that they both have equal weight?
   A. 17.35 kg
   B. 8.45 kg
   C. 12.65 kg
   D. 21.35 kg

44. Puneet wants to purchase a shirt of ₹ 2000. He has ₹ 760.65 in his digital wallet and received ₹ 432.85 from his friend. How much amount he still needs to purchase the shirt?
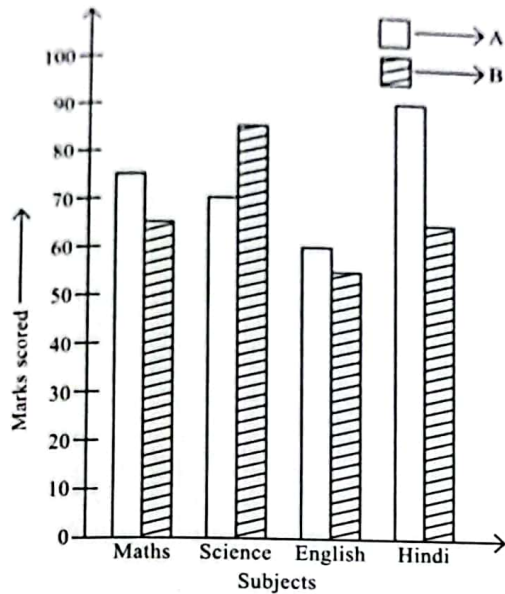   A. ₹ 806.50
   B. ₹ 718.75
   C. ₹ 903.25
   D. ₹ 684.90

45. A contractor sent 7695940 bricks for the construction of 70 chambers. If an equal number of bricks were required for each chamber, then how many bricks were used for each chamber?
   A. 99762
   B. 148762
   C. 59642
   D. 109942

46. The given bar graph shows the number of marks scored by A and B in four different subjects. Study the graph carefully and answer the following questions.

(i) How many more marks scored by A than B in all the subjects together?

(ii) What is the fraction of marks scored by A in Science and Hindi together to the marks scored by B in English and Maths together?

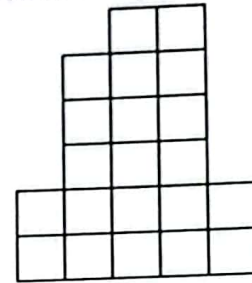|	(i)	(ii)
A.	50	$\frac{3}{4}$
B.	25	$\frac{4}{3}$
C.	25	$\frac{3}{4}$
D.	75	$\frac{4}{3}$

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

Statement-I : The value of $(672.734 - 347.487)$ when rounded to the nearest hundredths gives 325.25.

Statement-II : The value of $63.76 + 38.89 - 13.23$ is less than 90.

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

48. Some similar square shapes are kept as shown in the figure. If the perimeter of the whole figure is 308 cm, then find the area of the figure.

A. 1686 sq. cm
B. 4116 sq. cm
C. 3842 sq. cm
D. 5964 sq. cm

49. Fill in the blanks and select the correct option.

(i) Least common multiple of 24 and 45 is __P__.
(ii) The value of MXCVIII – CDXLIX is __Q__.
(iii) __R__ must be added in 4,65,893 to get one million.

	(P)	(Q)	(R)
A.	300	528	6,02,301
B.	360	513	6,13,204
C.	180	724	4,78,527
D.	360	649	5,34,107

50. If and , then find th weight of .

A. 70 g
B. 95 g
C. 75 g
D. 90 g

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