Please check the examination details below before entering your candidate information

Candidate Name	Class	Section

BLOOM Mathematics Olympiad (BMO)

Question Paper 2023-24

Class 5

Total Questions: **50 + 5** (Tie-Breaking Section)

Total Time Allotted : 60 minutes	**Total Marks** 60

Instructions

1. There are **50 Multiple Choice Questions** in this booklet having 4 options out of which **ONLY ONE** is correct.
2. There are two sections in the Question Paper; Section 1 having 40 Questions carrying 1 Mark each & Section 2 having 10 Higher Difficulty Order Questions carrying 2 Marks each.
3. All questions are compulsory. There is **NO negative** marking for incorrect answers.
4. Total time allotted to complete the paper is 60 minutes.
5. Please fill in your details in the space provided on this page before attempting the paper.

OMR Sheet Instructions

1. Before starting the paper, fill in all the details in the OMR Sheet.
2. Additional 10 minutes will be provided to fill up the OMR sheet, before the start of the exam.
3. Use HB Pencil to darken the circle of the correct Option in OMR sheet. The correct way to darken the circle in OMR sheet is shown below.

   ● ○ ○ ○
4. Use black or blue ball point pen/HB pencil to fill the information in the OMR sheet. Partially filled OMR sheet will not be checked.
5. Return the OMR sheet to the invigilator after the exam.

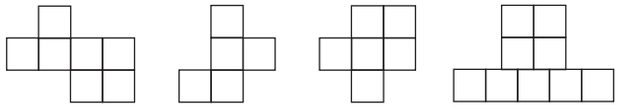
CODE#1

M5

BLOOM CAP
Founded by | arihant

Section 1 (1 Mark)

1. Which given figure(s) does/do not have a line of symmetry?



(*P*) (*Q*) (*R*) (*S*)

(a) *P* only (b) *Q* only
(c) *R* and *S* (d) *P* and *Q*

2. 6875 in words is

(a) six thousand seven hundred seventy eight.
(b) six thousand seven hundred seventy five
(c) six thousand eight hundred seventy five.
(d) six thousand seven hundred eighty five.

3. 70 Thousand ÷ 5 Hundred is equal to

(a) 100 (b) 120 (c) 1400 (d) 140

4. $777 + 77 + 7 = 7 \times ....$

(a) 121 (b) 111
(c) 123 (d) 124

5. $9 \div 3 \times 6 - 12 + 3 \times 10$ is equal to

(a) – 180 (b) 12
(c) 36 (d) None of these

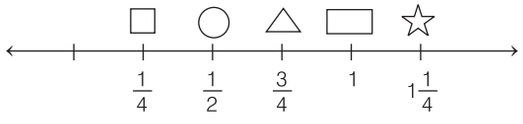
6. What percentage of 4 cm in 8 m?

(a) 2% (b) 0.25%
(c) 0.2% (d) 0.5%

7. What number divided by 9 gives an answer of 8?

(a) 70 (b) 64
(c) 72 (d) 27

8. Look at the number line. Between which shapes is $\frac{4}{5}$ lying?



(a) Between ◯ and △
(b) Between □ and ◯
(c) Between □ and ☆
(d) Between △ and ▭

9. Rahul recorded the time in which his 15 students completed a set of math problems.
Time (in sec) : 31 37 58 42 52 45 48 50
35 57 52 33 47 48 51

Then, she presented the record as shown below.

Time (in sec)	Number of students
30-39	||||
40-49	𝍸
50-59	?

How many tally marks should Rahul write in the row for 50-59 sec?

(a) 𝍸 \| (b) \|\|\|\|
(c) 𝍸 (d) 𝍸 \|\|\|

10. Multiply the 7th multiple of 9 by 3 is

(a) 189 (b) 190
(c) 191 (d) 188

11. Identify the number which is not even perfect square?

(a) 14 (b) 64
(c) 4 (d) 81

12. How many of the following numbers are multiples of both 9 and 12 ?

18, 27, 36, 60, 72, 84, 96, 144

(a) 1 (b) 2
(c) 3 (d) 4

13. What number am I?

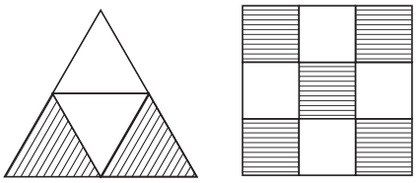
(i) I am a two-digit even number.
(ii) I am a common multiple of 6 and 7.
(iii) I have a total of 12 factors.

(a) 35 (b) 36 (c) 42 (d) 84

14. Which one of the following is not an equivalent fraction of $\frac{3}{8}$?

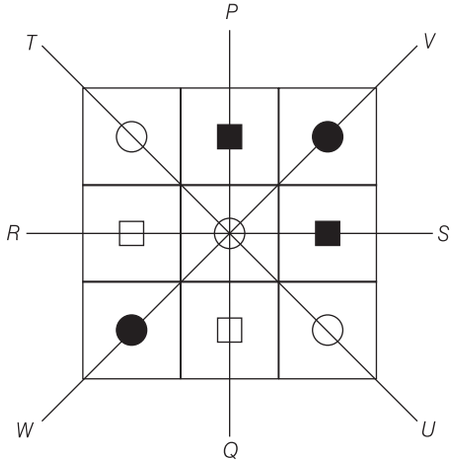
(a) $\frac{6}{16}$ (b) $\frac{12}{32}$ (c) $\frac{15}{40}$ (d) $\frac{9}{32}$

15. What is the product of shaded part of the following figure?



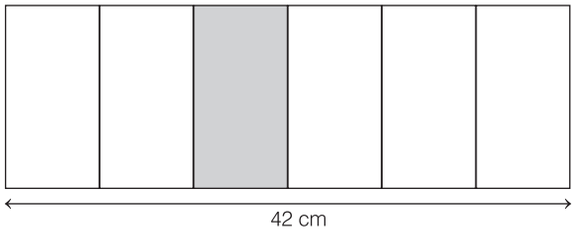
(a) $\frac{5}{36}$ (b) $\frac{5}{18}$ (c) $\frac{5}{9}$ (d) $\frac{10}{18}$

16. Which line in the diagram below is the correct line of symmetry?



(a) *PQ* (b) *RS* (c) *TU* (d) *VW*

17. The given rectangle is divided into 6 equal parts. If its breath is $\frac{2}{3}$ of its length, then the area of the shaded region is



(a) 178 cm^2 (b) 196 cm^2
(c) 190 cm^2 (d) 184 cm^2

18. Identify the place value of 2 in 21489, is

(a) Tens
(b) Ten thousands
(c) Thousands
(d) None of the above

19. A rectangle measuring 12 cm $\times$ 84 cm is divided into 7 parts such that each part is a square. The area of 4 of these parts is

(a) 574 cm^2 (b) 566 cm^2
(c) 576 cm^2 (d) 556 cm^2

20. Abhay invested a certain amount of money in a bank and got back ₹ 8400. If the bank paid an interest of ₹ 700, then the amount invested by Abhay is

(a) ₹ 7700 (b) ₹ 7800
(c) ₹ 8100 (d) ₹ 8000

21. Mohan, Vrinda and Manushi have ₹ 5000, ₹ 6000 and ₹ 5500 pocket money per month. How much money together they have as a pocket money?

(a) ₹ 16000 (b) ₹ 15000
(c) ₹ 15500 (d) ₹ 16500

22. Fill in the blank

3000.0051 = 3000+ ....+ 0.0001

(a) 0.05 (b) 0.5
(c) 0.005 (d) 0.0005

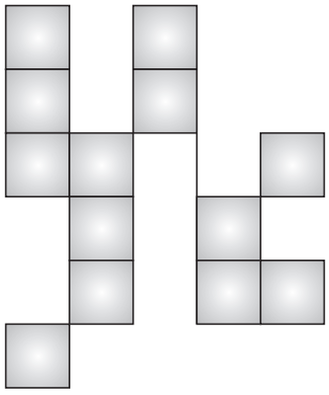
23. The capacity of a container is 1.40 L. It is filled with 300 mL of water, 285 mL of wine and 396 mL of syrup. Then, the amount of liquid that can still be poured into the container is

(a) 432 mL
(b) 420 mL
(c) 419 mL
(d) 350 mL

24. What is a polygon with 8 sides called?

(a) Hexagon
(b) Pentagon
(c) Octagon
(d) Heptagon

25. The area of the given figure made up of equal squares such that the side of each square is 20 cm is



(a) 4500 cm^2 (b) 4400 cm^2
(c) 5200 cm^2 (d) 4000 cm^2

26. Three times a certain number is 72. One-third of that certain number is

(a) 8 (b) 72 (c) 24 (d) 12

27. The decimal 0.026 is equal to the fractional number

(a) $\frac{234}{900}$ (b) $\frac{234}{9}$
(c) $\frac{234}{9000}$ (d) $\frac{423}{90}$

28. Ram works for 4 h in the morning and 3 h in the evening every day. He earns ₹ 75 per hour. His earning of a week is

(a) ₹ 3675 (b) ₹ 4200
(c) ₹ 4000 (d) ₹ 3600

29. To participate in Olympics, Agliya practised 3 h 50 min in the morning and 2 h 20 min in the afternoon on all week days. On weekend, she practised overall 4 h 45 min. How many hours did she practice in two weeks? [consider Sunday as weekend]

(a) 80 h 30 min (b) 81 h 30 min
(c) 82 h 30 min (d) 83 h 30 min

30. The sum of the place values of 3's in 35234 is

(a) 3003 (b) 30003
(c) 30030 (d) 30000

31. Two pounds of oranges cost ₹ 24 and five pounds of bananas cost ₹ 30.

What is the sum of cost of 4 pounds of oranges and 5 pounds of bananas?

(a) ₹ 87 (b) ₹ 78
(c) ₹ 50 (d) ₹ 80

32. In ΔABC, two angles are 60° and 45°. Then, the third angle is

(a) 70° (b) 75° (c) 80° (d) 85°

33. An accurate clock shows 6 o'clock in the morning. Through how many degrees will the hour hand rotate when the clock show 12 O'clock in the afternoon?

(a) 162° (b) 144°
(c) 182° (d) 180°

34. Which number will replace (?) in the equation given below?

$30 + [35 \div 7] - 4 = ?$

(a) 30 (b) 31 (c) 32 (d) 33

35. I have 600 pennies. If I spend 7 pennies a day until I can no longer do so, at the end of the 84th day I will have exactly ..... pennies left.

(a) 8 (b) 12 (c) 14 (d) 11

36. There are 14 bikes for every 8 cars parked in a lot. If there are a total of 220 bikes and cars parked in the lot, there are ..... bikes.

(a) 150 (b) 158 (c) 140 (d) 148

37. If 30 bags of rice weight 10 kg 500 g, then how many bags will weight 7 kg?

(a) 20 (b) 10 (c) 15 (d) 40

38. How many minutes does a minute hand take to turn 120°?

(a) 10 min (b) 20 min
(c) 18 min (d) 30 min

39. The sum $\frac{7}{10} + \frac{3}{100} + \frac{9}{1000}$ is equal to

(a) 0.0739 (b) 0.739
(c) 7.039 (d) 7.39

40. Which of the following fractions is correctly arranged in ascending order?

(a) $\frac{23}{17} < \frac{23}{6} < \frac{23}{9} < \frac{23}{19}$

(b) $\frac{23}{17} > \frac{23}{6} > \frac{23}{9} > \frac{23}{19}$

(c) $\frac{23}{19} < \frac{23}{17} < \frac{23}{9} < \frac{23}{6}$

(d) $\frac{23}{19} > \frac{23}{17} > \frac{23}{9} > \frac{23}{6}$

Section 2 (2 Marks)

41. If the product of two numbers is 10998 and one of the number is 47, then the other number is

(a) 198 (b) 234 (c) 268 (d) 284

42. Which of the following number has 5 in the thousands place?

(a) 5245 (b) 4387 (c) 2541 (d) 4532

43. Sachin had a rectangular garden 90 m wide. If he spents ₹ 2244 to fence it at ₹ 6 per meter, then the length of his garden is

(a) 96 m (b) 95 m (c) 97 m (d) 94 m

44. Which of the following statement(s) is true?

(P) If $y = 3x + 5$ and if $x = 0$, then $y = 5$.

(Q) In a class, total students are 50. In which two-fifth are boys and three-fifth are girls. Then, boys are 20.

(R) If we add 13 in 345, then it will be divisible by 13.

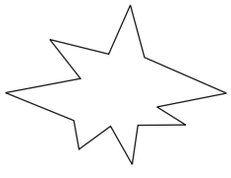
(a) (P) - T, (Q) - F, (R) - F

(b) (P) - T, (Q) - F, (R) - T

(c) (P) - T, (Q) - T, (R) - F

(d) (P) - F, (Q) - F, (R) - F

45. How many angles inside the figure are greater than a right angle?



(a) 5 (b) 6 (c) 7 (d) 8

46. Match the following

	List-I		List-II
(i)	$10234 + 24435 + 17324$	(P)	1000
(ii)	50 tens and 500 ones	(Q)	20708
(iii)	$800 + 9001 + 10907$	(R)	1500
(iv)	$1000 + 5$ hundreds	(S)	51993

(a) (i) - (S), (ii) - (P), (iii) - (Q), (iv) - (R)

(b) (i) - (P), (ii) - (S), (iii) - (Q), (iv) - (R)

(c) (i) - (Q), (ii) - (R), (iii) - (S), (iv) - (P)

(d) (i) - (R), (ii) - (P), (iii) - (Q), (iv) - (S)

47. A square carrom board has side 20 cm. Then, its perimeter is

(a) 60 cm (b) 80 cm

(c) 100 cm (d) 120 cm

48. Out of the given options, which value of A, B and C are applicable on

$$A \times B - C = 49100?$$

(a) $A = 845$, $B = 0$ and $C = 499$

(b) $A = 800$, $B = 455$ and $C = 100$

(c) $A = 995$, $B = 106$ and $C = 445$

(d) $A = 845$, $B = 59$ and $C = 755$

Directions (Q. Nos. 49-50) In class V, there are total 200 students. In which three-fifth are girls and two-fifth are boys. They all are playing three different games Hockey, Kho-Kho and Badminton. Three-tenth are playing Hockey, five-tenth are playing Kho-Kho and two-tenth are playing Badminton. They all are playing only these three games.

On the basis of above information, answer the following questions.

49. How many girls are there in class V?

(a) 80 (b) 120

(c) 140 (d) 100

50. Number of students playing Hockey are

(a) 70 (b) 60

(c) 40 (d) 80

Tie-Breaking Section

Instructions

1. This section consists of 5 questions.
2. The score achieved in this section will not be included in the total marks.
3. If overall marks of two or more students are same, winner will be decided based on the score in this section.
4. Participation in this section is optional, and students may choose to attempt it or not.

1. The ones digit of

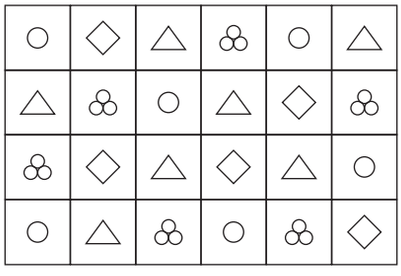
$$9 \times 8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 5 \times 4 \times 5 \times 6 \times 7 \times 8 \times 8 \text{ is}$$

(a) 8 (b) 1 (c) 0 (d) 2

2. Ram works 3.5 h in the morning, and 4 h in the evening. If he earns ₹ 70 per hour in the morning and ₹ 80 per hour in the evening and he works for 6 days in a week. Then, his earnings for 2 weeks is

(a) ₹ 3390 (b) ₹ 3930
(c) ₹ 6780 (d) ₹ 6000

3. What fraction of the figures are ○ ?

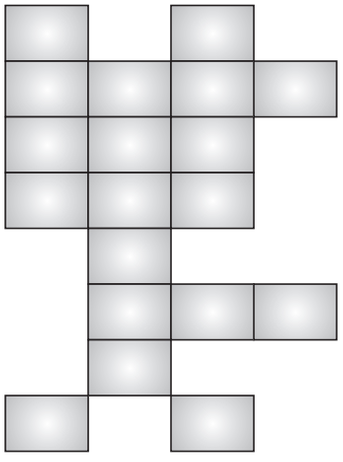


(a) $\frac{1}{4}$ (b) $\frac{1}{3}$ (c) $\frac{1}{5}$ (d) $\frac{1}{2}$

4. There are a total of 2000 clerks working in 10 banks. If there are 565 clerks at each of 2 banks. Then, how many clerks work in other 8 banks?

(a) 870 (b) 900
(c) 1130 (d) 565

5. The area of the given figure made up of equal squares such that the side of each square is 29 cm is



(a) 15000 cm^2 (b) 15979 cm^2
(c) 14979 cm^2 (d) 16979 cm^2