

Class 5 · Reasoning Olympiad

Total questions 50	Total marks 60	Time 60 minutes	Negative marking None
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Each question has four options, of which only one is correct. Mark your answer on the answer sheet. The Achievers Section carries higher marks per question. The answer key with full solutions is at the end of this paper.

This is original practice material written to the Level 1 pattern. It is not a past paper and is not affiliated with SOF or any official olympiad body.

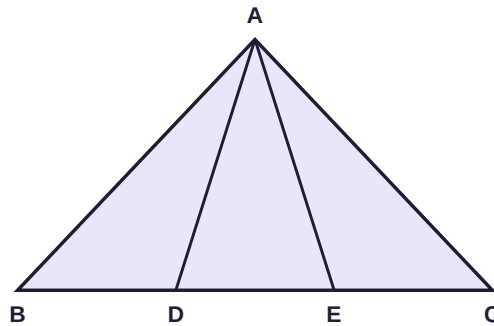
Logical Reasoning

45 questions · 1 mark each · 45 marks

Q1. Which letter comes next? E, G, I, K, ____

- (A) N (B) M (C) L (D) O

Q2. How many triangles are there in the given figure?



- (A) 6 (B) 8 (C) 5 (D) 7

Q3. Kabir walks 8 m towards north, turns right and walks 5 m, then turns right again and walks 8 m. How far is Kabir from the starting point, and in which direction?

- (A) 5 m, East (B) 5 m, West (C) 13 m, North (D) 8 m, East

Q4. Which letter comes next? D, F, I, M, ____

- (A) S (B) R (C) P (D) Q

Q5. A father is 5 years older than his son. The son is 19 years old now. How old will the father be after 2 years?

- (A) 26 years (B) 24 years (C) 28 years (D) 27 years

Q6. Three of the following four are alike and form a group. Which one does NOT belong?

- (A) Silver (B) Gold (C) Wood (D) Iron

Q7. Count backward in 2s: 22, 20, 18, 16, ____

- (A) 12 (B) 16 (C) 15 (D) 14

Q8. Find the odd one out: 36, 70, 72, 84, 96

- (A) 96 (B) 70 (C) 84 (D) 72

Q9. In a row of 24 children, Imran is 8th from the left end. What is Imran's position from the right end?

- (A) 17th (B) 18th (C) 19th (D) 16th

Q10. $6 : 36 :: 3 : \underline{\hspace{1cm}}$

- (A) 6 (B) 9 (C) 16 (D) 4

Q11. Which one does NOT belong with the others?

- (A) Square (B) Circle (C) Triangle (D) Pentagon

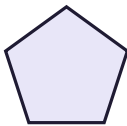
Q12. In a certain code HAT is written as KDW. How is CUP written in that code?

- (A) FXS (B) GYT (C) ZRM (D) SXF

Q13. Find the next number in the pattern: 2, 6, 14, 30, $\underline{\hspace{1cm}}$

- (A) 60 (B) 62 (C) 64 (D) 63

Q14. Which of these figures has exactly 4 lines of symmetry?



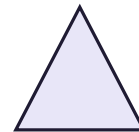
(A)



(B)



(C)



(D)

Q15. Which word would come FIRST in a dictionary?

- (A) matter (B) metal (C) marble (D) museum

Q16. In a class, 17 students play cricket, 12 play football and 4 play both games. Every student plays at least one of the two. How many students are there in the class?

- (A) 21 (B) 25 (C) 26 (D) 29

Q17. Find the next number in the pattern: 9, 17, 25, 33, $\underline{\hspace{1cm}}$

- (A) 41 (B) 42 (C) 33 (D) 49

Q18. In the first row the numbers are 4, 7 and 30. In the second row they are 5, 9 and 47. In the third row they are 5, 2 and $\underline{\hspace{1cm}}$. The same rule applies to every row.

- (A) 14 (B) 12 (C) 13 (D) 11

Q19. Sima walks 5 m north, then 10 m east, then 4 m south. Where is Sima now, relative to the starting point?

- (A) 2 m north and 10 m east (B) 1 m north and 11 m east
(C) 5 m north and 10 m east (D) 1 m north and 10 m east

Q20. Book : Library :: Medicine : $\underline{\hspace{1cm}}$

- (A) Studio (B) Garage (C) Pharmacy (D) Bakery

Q21. If RAT is written as 18 - 1 - 20 using the positions of the letters in the alphabet, how is CAT written?

- (A) 20 - 1 - 3 (B) 4 - 2 - 21 (C) 3 - 1 - 20 (D) 24 - 26 - 7

Q22. Pointing to a boy in a photograph, Anjali said, "He is the son of my paternal grandfather's only son." How is the boy related to Anjali?

- (A) Nephew (B) Brother (C) Uncle (D) Cousin

Q23. Five friends A, B, C, D and E sit in a row of five seats. A sits at the extreme left end, D sits at the extreme right end, C sits exactly in the middle and B sits between A and C. Who sits in the fourth seat from the left?

- (A) B (B) C (C) E (D) D

Q24. If the 10th of a month is a Sunday, what day of the week is the 19th of the same month?

- (A) Wednesday (B) Monday (C) Thursday (D) Tuesday

Q25. In a queue, Farah is 7th from the front and 10th from the back. How many people are in the queue altogether?

- (A) 15 (B) 17 (C) 16 (D) 18

Q26. Which letter comes next? A, E, I, M, ____

- (A) R (B) U (C) P (D) Q

Q27. Anita walks 5 m towards north, turns right and walks 2 m, then turns right again and walks 5 m. How far is Anita from the starting point, and in which direction?

- (A) 7 m, North (B) 2 m, East (C) 5 m, East (D) 2 m, West

Q28. Which letter comes next? E, G, J, N, ____

- (A) S (B) R (C) T (D) Q

Q29. A father is 8 years older than his son. The son is 11 years old now. How old will the father be after 5 years?

- (A) 29 years (B) 24 years (C) 19 years (D) 25 years

Q30. Count backward in 5s: 55, 50, 45, 40, ____

- (A) 40 (B) 30 (C) 36 (D) 35

Q31. Find the odd one out: 15, 18, 26, 27, 30

- (A) 15 (B) 27 (C) 26 (D) 18

Q32. In a row of 19 children, Sana is 15th from the left end. What is Sana's position from the right end?

- (A) 4th (B) 6th (C) 5th (D) 7th

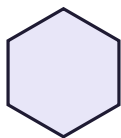
Q33. $4 : 16 :: 5 : \underline{\hspace{1cm}}$

- (A) 36 (B) 10 (C) 16 (D) 25

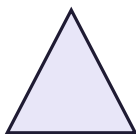
Q34. In a certain code HAT is written as JCV. How is MAP written in that code?

- (A) OCR (B) RCO (C) PDS (D) KYN

Q35. Which of these figures has exactly 3 lines of symmetry?



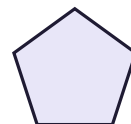
(A)



(B)



(C)



(D)

Q36. In a class, 20 students play cricket, 20 play football and 7 play both games. Every student plays at least one of the two. How many students are there in the class?

- (A) 34 (B) 33 (C) 40 (D) 26

Q37. Find the next number in the pattern: 5, 12, 19, 26, ____

- (A) 26 (B) 40 (C) 33 (D) 34

Q38. In the first row the numbers are 4, 7 and 22. In the second row they are 7, 9 and 32. In the third row they are 7, 3 and ____ . The same rule applies to every row.

- (A) 19 (B) 20 (C) 21 (D) 22

Q39. Nila walks 10 m north, then 6 m east, then 6 m south. Where is Nila now, relative to the starting point?

- (A) 4 m north and 6 m east (B) 10 m north and 6 m east
(C) 5 m north and 6 m east (D) 4 m north and 7 m east

Q40. If RAT is written as 18 - 1 - 20 using the positions of the letters in the alphabet, how is INK written?

- (A) 11 - 14 - 9 (B) 18 - 13 - 16 (C) 10 - 15 - 12 (D) 9 - 14 - 11

Q41. If the 10th of a month is a Tuesday, what day of the week is the 21th of the same month?

- (A) Friday (B) Saturday (C) Monday (D) Sunday

Q42. In a queue, Deep is 4th from the front and 6th from the back. How many people are in the queue altogether?

- (A) 10 (B) 11 (C) 8 (D) 9

Q43. Which letter comes next? B, F, J, N, ____

- (A) V (B) Q (C) R (D) S

Q44. Arjun walks 8 m towards north, turns right and walks 2 m, then turns right again and walks 8 m. How far is Arjun from the starting point, and in which direction?

- (A) 8 m, East (B) 2 m, West (C) 2 m, East (D) 10 m, North

Q45. Which letter comes next? C, E, H, L, ____

- (A) O (B) Q (C) R (D) P

Achievers Section

5 questions · 3 marks each · 15 marks

Q46. Find the next number: 4, 6, 10, 16, 24, ____

- (A) 34 (B) 36 (C) 35 (D) 32

Q47. The average of 3 numbers is 18. 2 of them are 23, 16. What is the remaining number?

- (A) 18 (B) 17 (C) 15 (D) 13

Q48. If FISH is coded as GJTI, how is MILK coded?

- (A) LHKJ (B) OKNM (C) LMJN (D) NJML

Q49. How many numbers between 40 and 65 leave a remainder of 2 when divided by 7?

- (A) 3 (B) 4 (C) 5 (D) 2

Q50. Rahul finished the puzzle in two minutes and said it was 'to burn the midnight oil'. What did he mean?

(A) to work late into the night

(B) to fall asleep

(C) to waste money

(D) to cook dinner

Answer Key

1	2	3	4	5	6	7	8	9	10
B	A	A	B	A	C	D	B	A	B
11	12	13	14	15	16	17	18	19	20
B	A	B	C	C	B	A	B	D	C
21	22	23	24	25	26	27	28	29	30
C	B	C	D	C	D	B	A	B	D
31	32	33	34	35	36	37	38	39	40
C	C	D	A	B	B	C	B	A	D
41	42	43	44	45	46	47	48	49	50
B	D	C	C	B	A	C	D	A	A

Solutions

Q1. (B) Each letter moves 2 place(s) forward in the alphabet, so after K comes M.

Q2. (A) Every triangle has apex A and two of the 4 base points as its other corners. Choosing 2 from 4 gives 6 triangles.

Q3. (A) The two 8 m walks (north, then south) cancel out, leaving only the 5 m walked towards the east. So the answer is 5 m, East.

Q4. (B) The gaps grow by one each time (+2, +3, +4, +5), so after M the next letter is R.

Q5. (A) The father is $19 + 5 = 24$ now, so after 2 years he will be $24 + 2 = 26$ years.

Q6. (C) Iron, Silver, Gold are all metals; Wood is not.

Q7. (D) Subtracting 2 from 16 gives 14.

Q8. (B) Every other number is a multiple of 12. 70 is not.

Q9. (A) Position from the right = total - position from the left + 1 = $24 - 8 + 1 = 17$ th.

Q10. (B) The second number is the first multiplied by itself: $6 \times 6 = 36$, so $3 \times 3 = 9$.

Q11. (B) Circle has no straight sides.

Q12. (A) Each letter moves 3 place(s) forward in the alphabet, so CUP becomes FXS.

Q13. (B) Each number is doubled and 2 is added: $30 \times 2 + 2 = 62$.

Q14. (C) Counting lines of symmetry: regular pentagon has 5, rectangle has 2, square has 4, equilateral triangle has 3. The answer is figure (C).

Q15. (C) In alphabetical order the words run marble, matter, metal, museum, so marble comes first.

Q16. (B) $17 + 12 - 4 = 25$. The 4 who play both were counted twice, so they are subtracted once.

Q17. (A) Each number is 8 more than the one before it, so the next is $33 + 8 = 41$.

Q18. (B) The rule is: multiply the two numbers, then add 2. Check: 4, 7 gives 30 and 5, 9 gives 47; so 5, 2 gives 12.

Q19. (D) The 4 m south cancels part of the 5 m north, leaving $5 - 4 = 1$ m north, and the 10 m east is unchanged. So Sima is 1 m north and 10 m east.

Q20. (C) The second word relates to the first in the same way Pharmacy relates to Medicine.

- Q21. (C) C is letter 3 and A is letter 1 and T is letter 20, so $CAT = 3 - 1 - 20$.
- Q22. (B) Anjali's paternal grandfather's only son is Anjali's own father, so that man's son is Anjali's own sibling. The answer is Brother.
- Q23. (C) Seat 1 = A, seat 3 = C, seat 5 = D. B must be between A and C, so B takes seat 2, and the only friend left for seat 4 is E.
- Q24. (D) 9 days later is 1 week(s) and 2 day(s), so the day moves 2 place(s) on from Sunday to Tuesday.
- Q25. (C) Counting Farah only once: $7 + 10 - 1 = 16$ people.
- Q26. (D) Each letter moves 4 place(s) forward in the alphabet, so after M comes Q.
- Q27. (B) The two 5 m walks (north, then south) cancel out, leaving only the 2 m walked towards the east. So the answer is 2 m, East.
- Q28. (A) The gaps grow by one each time (+2, +3, +4, +5), so after N the next letter is S.
- Q29. (B) The father is $11 + 8 = 19$ now, so after 5 years he will be $19 + 5 = 24$ years.
- Q30. (D) Subtracting 5 from 40 gives 35.
- Q31. (C) Every other number is a multiple of 3. 26 is not.
- Q32. (C) Position from the right = total - position from the left + 1 = $19 - 15 + 1 = 5$ th.
- Q33. (D) The second number is the first multiplied by itself: $4 \times 4 = 16$, so $5 \times 5 = 25$.
- Q34. (A) Each letter moves 2 place(s) forward in the alphabet, so MAP becomes OCR.
- Q35. (B) Counting lines of symmetry: regular hexagon has 6, equilateral triangle has 3, square has 4, regular pentagon has 5. The answer is figure (B).
- Q36. (B) $20 + 20 - 7 = 33$. The 7 who play both were counted twice, so they are subtracted once.
- Q37. (C) Each number is 7 more than the one before it, so the next is $26 + 7 = 33$.
- Q38. (B) The rule is: add the two numbers and double the result. Check: 4, 7 gives 22 and 7, 9 gives 32; so 7, 3 gives 20.
- Q39. (A) The 6 m south cancels part of the 10 m north, leaving $10 - 6 = 4$ m north, and the 6 m east is unchanged. So Nila is 4 m north and 6 m east.
- Q40. (D) I is letter 9 and N is letter 14 and K is letter 11, so $INK = 9 - 14 - 11$.
- Q41. (B) 11 days later is 1 week(s) and 4 day(s), so the day moves 4 place(s) on from Tuesday to Saturday.
- Q42. (D) Counting Deep only once: $4 + 6 - 1 = 9$ people.
- Q43. (C) Each letter moves 4 place(s) forward in the alphabet, so after N comes R.
- Q44. (C) The two 8 m walks (north, then south) cancel out, leaving only the 2 m walked towards the east. So the answer is 2 m, East.
- Q45. (B) The gaps grow by one each time (+2, +3, +4, +5), so after L the next letter is Q.
- Q46. (A) The gaps grow 2, 4, 6, 8, so the next gap is 10 and $24 + 10 = 34$.
- Q47. (C) The 3 numbers add up to $18 \times 3 = 54$. The given numbers add up to 39, so the missing number is $54 - 39 = 15$.
- Q48. (D) Every letter moves 1 place(s) forward, so MILK becomes NJML.
- Q49. (A) The numbers are 44, 51, 58 — 3 of them.
- Q50. (A) In this sentence 'to burn the midnight oil' means to work late into the night.

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