School Connect Online

SCO INTERNATIONAL OLYMPIAD

GRADE 4 PREVIOUS YEAR PAPER SYLLABUS

SCO INTERNATIONAL MENTAL ABILITY OLYMPIAD

Official QUESTION PAPER | Class 4

Designed from Class 4 reasoning-skill pathways and aligned with SCO preparation, practice, reporting, and future-ready analytical growth.

- Chapter-wise official syllabus for Class 4 Mental Ability preparation
- Learning outcomes focused on logical, verbal, non-verbal, and applied reasoning
- Useful for schools, teachers, parents, and students preparing for SCO Olympiad

Series	Coding	Alphabet	Puzzles	Calendar
Ranking	Analogy	Cubes	Images	Data Suff.

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SCO International Mental Ability Olympiad

Class 4 Official Question Paper with Answer Key and Explanations

Class / Grade	Class 4
Exam	SCO International Mental Ability Olympiad
Question Paper Set	A
Session	2025-26
Total Questions	35
Time	1 hour

Candidate Guidelines

Total Questions: 35 | Time: 1 hour
The paper has one correct answer for each multiple-choice question.
No negative marking is applied. Calculator use is not allowed unless specifically instructed.
All diagrams, passages, and tables belong to the question block in which they appear.
For OMR-style practice, shade only one option for each question.

Section A: General Mental Ability (Q1-Q20)

Q1. During recess, students notice that the number of swings in the playground follows a pattern: day 1 has 3 swings, day 2 has 7 swings, day 3 has 12 swings, and day 4 has 18 swings. What is the number of swings on day 5?

A) 24	B) 25
C) 26	D) 27

Answer: B) 25

Explanation: The differences are 4, 5, and 6. The next difference is 7, so 18 + 7 = 25.

Q2. A librarian uses a secret code for book labels. The rule is: replace each letter with its mirror letter (A <-> Z, B <-> Y, etc.) and then shift 2 letters backward. What is the coded form of BOOK?

A) WJJN	B) WJIN
C) XJJN	D) XJIN

Answer: A) WJJN

Explanation: B mirrors to Y, then shifts back to W. O mirrors to L, then shifts back to J. K mirrors to P, then shifts back to N. So BOOK becomes WJJN.

Q3. A teacher creates a letter sequence by taking a letter position and adding an increasing number: first add 2, then 3, then 4, and so on. Starting with A, what is the 5th letter?

A) J	B) K
C) O	D) P

Answer: C) O

Explanation: A(1), C(3), F(6), J(10), O(15). Therefore, the 5th letter is O.

Q4. A secret code is made by shifting each letter 3 places forward and then swapping the first and last letters of the result. What is the coded form of TREE?

A) HUHW	B) WHHU
C) HUHH	D) WHUH

Answer: A) HUHW

Explanation: TREE shifted 3 places becomes WUHH. Swapping the first and last letters gives HUHW.

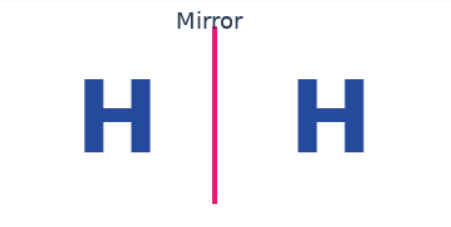
Q5. In a 20-student race, if a student finishes 4th from the top, what is his rank from the bottom?

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

Answer: B) 17th

Explanation: Rank from bottom = total - rank from top + 1 = 20 - 4 + 1 = 17.

Q6. The letter H is written on a transparent sheet. Which letter from the options is most likely to look the same in a vertical mirror?



A) F	B) H
C) L	D) R

Answer: B) H
Explanation: H has vertical symmetry, so its mirror image looks unchanged.

Q7. A craft teacher says: The solid must have all faces identical and square. Which solid matches this condition?

A) Sphere	B) Cube
C) Pyramid	D) Cylinder

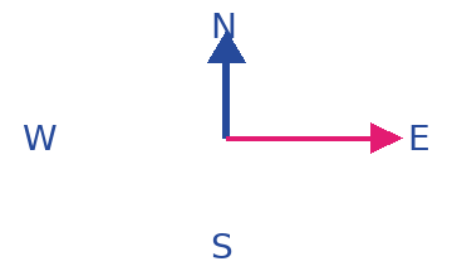
Answer: B) Cube
Explanation: A cube has 6 identical square faces.

Q8. A student draws a small circle inside a large square so that the circle touches all four sides of the square. Which term best describes this arrangement?

A) Circumscribed	B) Inscribed
C) Congruent	D) Overlapping

Answer: B) Inscribed
Explanation: A figure placed inside another figure and touching its boundary is called inscribed.

Q9. Sam stands facing North. He turns 90 degrees to his right, then 180 degrees around, and finally 90 degrees to his left. Which direction is Sam facing now?



A) North	B) East
C) South	D) West

Answer: C) South
Explanation: North -> right turn gives East; 180 degrees gives West; left from West gives South.

Q10. A class can be held on any two different weekdays out of Monday, Tuesday, Wednesday, Thursday, and Friday. How many possible pairs of days can be chosen?

A) 8	B) 10
C) 12	D) 15

Answer: B) 10
Explanation: Choosing 2 days from 5 gives 5 x 4 / 2 = 10 possible pairs.

Q11. At a toy factory, production follows this pattern: January 12 figures, February 16 figures, March 22 figures, April 30 figures. What is the production in April, and if January 1 is Monday, what day is April 1?

A) 30 figures; Sunday	B) 30 figures; Monday
C) 28 figures; Sunday	D) 28 figures; Monday

Answer: A) 30 figures; Sunday
Explanation: The production increases by 4, 6, and 8, so April is 30. Calendar shift: January has 31 days (+3), February 28 days (+0), March 31 days (+3), so April 1 is Sunday.

Q12. A librarian creates a book code by taking the first two letters of a title, replacing each with its mirror letter, then shifting each letter one position backward. If the title is MATH, what is the code?

A) MY	B) NZ
C) MX	D) NY

Answer: A) MY
Explanation: The first two letters are M and A. Mirror letters are N and Z. Shifting backward gives M and Y.

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Q13. A sequence starts with B (position 2). The increments are 3, 4, 5, and so on. What is the 5th letter?

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

Answer: D) T
Explanation: B(2), E(5), I(9), N(14), T(20). Thus, the 5th letter is T.

Q14. At a small shop, pencil prices form a sequence: $1.00, $1.10, $1.20, $1.30. What is the total cost of 4 pencils?

A) $4.50	B) $4.60
C) $4.70	D) $4.80

Answer: B) $4.60
Explanation: Total = 1.00 + 1.10 + 1.20 + 1.30 = $4.60.

Q15. A jar contains red, green, and blue marbles. Red marbles equal blue marbles, and green marbles are 8 more than red marbles. If the total is 44, how many blue marbles are there?

A) 10	B) 11
C) 12	D) 13

Answer: C) 12
Explanation: Let red = blue = x and green = x + 8. Then x + x + (x + 8) = 44, so 3x = 36 and x = 12.

Q16. A school trip is on the 25th day of a month. If the 1st day of that month is Thursday, what day is the trip?

Mon	Tue	Wed	Thu	Fri	Sat	Sun
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	31				

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

Answer: C) Sunday
Explanation: From the 1st to the 25th is 24 days. 24 divided by 7 leaves remainder 3. Thursday + 3 days = Sunday.

Q17. In a drawing contest with 35 participants, if a student finishes 6th from the top, what is his rank from the bottom?

A) 28th	B) 29th
C) 30th	D) 31st

Answer: C) 30th
Explanation: Rank from bottom = 35 - 6 + 1 = 30.

Q18. A baker made 90 cookies. He sells one-third of them and then bakes 15 more cookies. How many cookies does he have now?

A) 70	B) 75
C) 80	D) 85

Answer: B) 75
Explanation: One-third of 90 is 30. Remaining cookies = 60. After baking 15 more, total = 75.

Q19. In a family, K is the daughter of L, and L is the sister of M. If M is female, how is M related to K?

A) Aunt	B) Uncle
C) Cousin	D) Sister

Answer: A) Aunt
Explanation: L is K's mother and M is L's sister, so M is K's aunt.

Q20. A cube is painted on all its faces and cut into 64 smaller cubes (4 x 4 x 4). How many smaller cubes have exactly two painted faces?

A) 20	B) 22
C) 24	D) 26

Answer: C) 24
Explanation: Each of the 12 edges has 4 - 2 = 2 non-corner cubes with exactly two painted faces. Total = 12 x 2 = 24.

Section B: Reason and Assertion (Q21-Q25)

Q21. Assertion: In a series where each number is formed by adding 2 to the previous number starting from 3, every number in the series is odd. Reason: Adding 2 to an odd number always results in an odd number.

A) Both are true, and Reason explains Assertion	B) Both are true, but Reason does not explain Assertion
C) Assertion is true, Reason is false	D) Both are false

Answer: A) Both are true, and Reason explains Assertion

Explanation: Starting from an odd number and adding 2 preserves oddness, so the reason correctly explains the assertion.

Q22. Assertion: When each vowel is replaced by its mirror letter, none of the vowels remain vowels. Reason: A, E, I, O, U mirror to Z, V, R, L, and F respectively.

A) Both are true, and Reason explains Assertion	B) Both are true, but Reason does not explain Assertion
C) Assertion is true, Reason is false	D) Both are false

Answer: A) Both are true, and Reason explains Assertion

Explanation: Z, V, R, L, and F are consonants, so the reason correctly explains the assertion.

Q23. Assertion: If the code rule shifts each letter two positions forward, then ZZ becomes BB. Reason: After Z comes A, so shifting Z by two positions results in B.

A) Both are true, and Reason explains Assertion	B) Both are true, but Reason does not explain Assertion
C) Assertion is true, Reason is false	D) Both are false

Answer: A) Both are true, and Reason explains Assertion

Explanation: Z -> A -> B. Therefore, both Z letters become B.

Q24. Assertion: In a line of 20 students, if a child is 4th from the top, the rank from the bottom is 17th. Reason: Rank from bottom is total students minus top rank plus 1.

A) Both are true, and Reason explains Assertion	B) Both are true, but Reason does not explain Assertion
C) Assertion is true, Reason is false	D) Both are false

Answer: A) Both are true, and Reason explains Assertion

Explanation: 20 - 4 + 1 = 17, so the reason correctly explains the assertion.

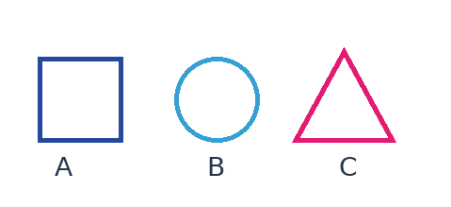
Q25. Assertion: The letter O looks the same in a mirror image. Reason: O is symmetrical in all directions.

A) Both are true, and Reason explains Assertion	B) Both are true, but Reason does not explain Assertion
C) Assertion is true, Reason is false	D) Both are false

Answer: A) Both are true, and Reason explains Assertion
Explanation: O has mirror symmetry, so it appears unchanged.

Section C: Case Study and Applied Reasoning (Q26-Q30)

Q26. Case Study: A class studies basic shapes. The teacher shows a square, a circle, and a triangle. Which shape has exactly 3 sides?



A) Square	B) Circle
C) Triangle	D) Cube

Answer: C) Triangle
Explanation: A triangle is a two-dimensional shape with exactly 3 sides.

Q27. Case Study: A student is arranging activity cards in dictionary order: Apple, Apron, Arrow, Artist. Which word comes second?

A) Apple	B) Apron
C) Arrow	D) Artist

Answer: B) Apron
Explanation: Dictionary order is Apple, Apron, Arrow, Artist.

Q28. Case Study: A sports teacher places cones in a line. There are 5 cones in the first row, 8 in the second row, 11 in the third row. If the pattern continues, how many cones are in the fifth row?

A) 14	B) 15
C) 17	D) 19

Answer: C) 17
Explanation: The pattern adds 3 each time: 5, 8, 11, 14, 17.

Q29. Case Study: A child walks 10 steps north and then 10 steps east. Which direction is the child from the starting point?

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

Answer: A) North-East
Explanation: Moving north and then east places the child in the north-east direction from the start.

Q30. Case Study: A teacher gives four objects: spoon, fork, plate, pencil. Which one does not belong with the group?

A) Spoon	B) Fork
C) Plate	D) Pencil

Answer: D) Pencil
Explanation: Spoon, fork, and plate are eating-related objects. Pencil is used for writing.

Section D: Achievers Section (Q31-Q35)

Q31. A school creates registration codes by taking the first two letters of a student's name, replacing each with its mirror letter, shifting each forward by 2, and appending a two-digit registration day. If SAMUEL registers on the 4th term of the series 2, 4, 7, 11, ..., what is the code?

A) JB11	B) KB11
C) JB13	D) KB13

Answer: A) JB11
Explanation: The 4th term is 11. SA mirrors to HZ. Shifting forward by 2 gives JB, so the code is JB11.

Q32. A rainy-day bus departs 7 minutes late and its travel time increases by 30%. Normally it departs at 7:00 AM and takes 40 minutes. Seat numbers are 4, 7, 12, ... If a student gets seat number 12, what is the seat position and arrival time?

A) 3rd seat; 7:59 AM	B) 3rd seat; 8:05 AM
C) 4th seat; 7:59 AM	D) 4th seat; 8:05 AM

Answer: A) 3rd seat; 7:59 AM

Explanation: Seat 12 is the 3rd term. New departure is 7:07 AM and travel time is 40 x 1.30 = 52 minutes, so arrival is 7:59 AM.

Q33. A design contest chooses a shape based on name length: 5-6 letters means square, fewer than 5 means circle, and more than 6 means triangle. For ALICE, the coded element uses the last two letters CE, mirror letters, then shift forward by 1. What is the shape and code?

A) Square, YW	B) Circle, YW
C) Square, YX	D) Triangle, YW

Answer: A) Square, YW

Explanation: ALICE has 5 letters, so the shape is square. C mirrors to X and shifts to Y; E mirrors to V and shifts to W.

Q34. Donations follow a pattern: $30 first, then increases of $5, $7, and $9. What is the total of the first 4 donations?

A) $154	B) $156
C) $158	D) $160

Answer: C) $158

Explanation: The donations are 30, 35, 42, and 51. Their total is 158.

Q35. A school event code uses the mirror of the first letter of ALPHA, then shifts it 1 forward, and adds the weekday of the 17th day of a month that starts on Wednesday. What is the event code?

A) A-Fri	B) Z-Fri
C) A-Thu	D) Z-Thu

Answer: A) A-Fri

Explanation: A mirrors to Z and shifts forward to A. The 17th is 16 days after the 1st. 16 mod 7 = 2; Wednesday + 2 = Friday.

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Answer Key Summary

Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer
1	B	8	B	15	C	22	A	29	A
2	A	9	C	16	C	23	A	30	D
3	C	10	B	17	C	24	A	31	A
4	A	11	A	18	B	25	A	32	A
5	B	12	A	19	A	26	C	33	A
6	B	13	D	20	C	27	B	34	C
7	B	14	B	21	A	28	C	35	A