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SCO INTERNATIONAL OLYMPIAD

CLASS 3 CODING OLYMPIAD

Solved question paper for schools, teachers, parents, and students

Designed from Class 3 coding and logic pathways and aligned with SCO's platform flow for guided preparation, practice, reporting, and future-ready digital growth.

- age-fit coding and computational-thinking practice for Class 3 learners globally
- section-wise pathways across Coding Fundamentals, Logic and Reasoning, Game Creation, Scratch, Algorithms, and Debugging
- answer key, explanations, correction notes, and revision support for confident olympiad preparation

Coding	Logic	Scratch	Games	Robotics Patterns
Algorithms	Debugging	Sprites	Reasoning	Practice

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Solved Question Paper

SCO International Coding Olympiad - Class 3 - Set A - 2025-26

This solved question paper is prepared for student learning, classroom revision, school practice, and teacher-led discussion. Each question is presented in a structured block with options, the correct answer, and a concept-based explanation. Visuals are included only where they support the question and are placed inside the question block.

Name	Registration ID	Contact No.
.....	.....	.....

Class	Question Paper Set	Total Questions	Time
3	A	35	1 hour

Guidelines for the Candidate

Read before attempting the paper

- Before the exam begins, complete the OMR/personal information section carefully.
- Write the name, school code, class, roll number/registration details, and contact number clearly where required.
- The paper contains 35 questions divided into Fundamentals of Coding, game/animation basics, debugging, coding project steps, and Achievers practice.
- Each question has exactly one correct answer in the corrected final paper.
- Use an HB pencil or blue/black ballpoint pen to mark the answer as instructed by the school or examination system.
- Calculator use is not required. Focus on logic, sequence, pattern recognition, Scratch concepts, and coding vocabulary.
- Use the solved answers and explanations after attempting the paper for self-checking and revision.

Paper Structure

This paper begins with coding fundamentals and then moves into Scratch/game vocabulary, debugging, coding project sequence, logic statements, and achiever-level coding decisions. The solved format helps learners understand why an answer is correct, not only which option to mark.

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Section: Fundamentals of Coding

Question block with answer and explanation

Q1

What is the purpose of a programming language?

A. To solve mathematical problems only
B. To communicate with a computer and give instructions
C. To create documents like a word processor
D. To store images and videos

Correct Answer: B. To communicate with a computer and give instructions

Explanation: A programming language is used to write instructions that a computer can understand and execute.

Q2

Which of the following is NOT an example of an input device?

A. Keyboard
B. Mouse
C. Printer
D. Touchscreen

Correct Answer: C. Printer

Explanation: A printer gives output on paper. A keyboard, mouse, and touchscreen are input devices because they send information to the computer.

Q3

In coding, what does a loop do?

A. It stops the program immediately
B. It repeats a set of instructions multiple times
C. It deletes all the lines of code
D. It adds random numbers to the code

Correct Answer: B. It repeats a set of instructions multiple times

Explanation: A loop repeats the same instruction or group of instructions until the program reaches a stopping condition.

Q4

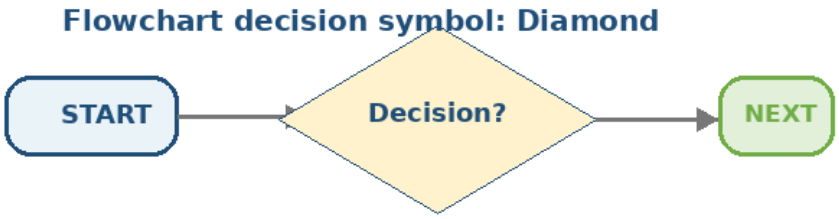
What is an algorithm?

A. A set of step-by-step instructions to solve a problem
B. A type of computer virus
C. A tool used to write stories
D. A type of game

Correct Answer: A. A set of step-by-step instructions to solve a problem

Explanation: An algorithm is a clear step-by-step method for solving a problem or completing a task.

Q5 **Which symbol is commonly used to show decision-making in flowcharts?**

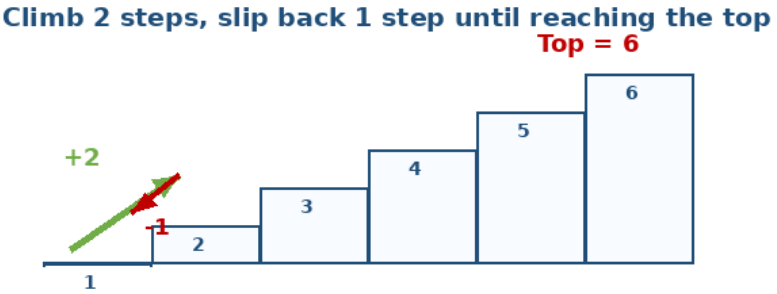


A. Oval
B. Rectangle
C. Diamond
D. Circle

Correct Answer: C. Diamond

Explanation: A diamond is commonly used in a flowchart to show a decision such as Yes/No or True/False.

Q6 **A monkey climbs 2 steps at a time and slips back 1 step after each climb until it reaches the top. How many climbs are needed to reach the 6th step?**



A. 3
B. 4
C. 6
D. 5

Correct Answer: D. 5

Explanation: The monkey reaches step 2, slips to 1; reaches 3, slips to 2; reaches 4, slips to 3; reaches 5, slips to 4; then reaches 6 on the fifth climb.

Q7 **Which statement is correct about debugging in coding?**

A. It is the process of finding and fixing errors in a program
B. It is a tool to draw pictures
C. It is used for writing emails
D. It is a method of playing games

Correct Answer: A. It is the process of finding and fixing errors in a program

Explanation: Debugging is the process of identifying and fixing errors so that the program works correctly.

Q8 **Which of the following logic statements is correct?**

A. 5 is greater than 10
B. A triangle has four sides
C. A computer follows instructions given to it
D. Coding is not related to problem-solving

Correct Answer: C. A computer follows instructions given to it

Explanation: Computers follow the instructions provided in a program. They do not think independently like humans.

Q9 **Identify the odd one out.**

A. AND
B. OR
C. IF
D. CAT

Correct Answer: D. CAT

Explanation: AND, OR, and IF are used in logic or programming. CAT is an animal and does not belong to this coding group.

Q10 **What is a variable in programming?**

A. A tool that only stores pictures
B. A container that holds data or information
C. A special kind of computer hardware
D. A set of instructions for a game

Correct Answer: B. A container that holds data or information

Explanation: A variable is a named container that stores a value such as a number, word, score, or status.

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Section: Simple Game and Animation Basics

Question block with answer and explanation

Q11

If you want a character to move left in a game, which direction key would you use?

A. Up Arrow
B. Down Arrow
C. Left Arrow
D. Right Arrow

Correct Answer: C. Left Arrow

Explanation: The left arrow key is normally used to move a character toward the left side of the screen.

Q12

What is the main purpose of sprites in a game?

A. To store game data
B. To create moving characters and objects
C. To delete errors
D. To write game codes

Correct Answer: B. To create moving characters and objects

Explanation: Sprites are the characters or objects that can move, speak, change appearance, and interact in a Scratch-style game.

Q13

In a simple animation, if you want to make an object disappear, which command should you use?

A. Show
B. Hide
C. Jump
D. Speak

Correct Answer: B. Hide

Explanation: The hide command makes a sprite or object disappear from the stage.

Q14

What happens when you increase the frame rate in an animation?

A. The animation moves faster
B. The animation stops working
C. The computer restarts
D. The colors of the animation change

Correct Answer: A. The animation moves faster

Explanation: Increasing the frame rate usually makes an animation appear smoother and faster because more frames are shown per second.

Q15	**If you create a game where a ball bounces when it touches a wall, which coding concept are you using?** A. Loop B. Condition C. Function D. Variable **Correct Answer: B. Condition** Explanation: A condition checks whether the ball is touching the wall. If the condition is true, the ball can bounce back.

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Section: Problem Solving and Debugging

Question block with answer and explanation

Q16

Sara is creating a game where a cat jumps over an obstacle when she presses the space key. However, when she runs the program, the cat does not jump. What should she check first?

A. If her computer is turned on
B. If the Jump block is connected properly
C. If the cat can talk
D. If the spacebar key is working in her email

Correct Answer: B. If the Jump block is connected properly

Explanation: The most likely coding issue is that the jump instruction is not connected properly to the event that detects the space key.

Q17

Below is simple pseudocode. What is the mistake in the logic?

```
if (score > 10)
    print("You win!")
else
    print("Game over!")
```

A. The word print should be display
B. There should be a semicolon after if
C. The else statement should be removed
D. There is no logic mistake

Correct Answer: D. There is no logic mistake

Explanation: As pseudocode, the decision is logically correct: if score is more than 10, it prints You win; otherwise, it prints Game over.

Q18

Teacher: Can anyone tell me why computers follow our instructions exactly as we give them? Which student gave the correct answer?

A. Student A: Because computers have a brain like humans.
B. Student B: Because computers can think and decide by themselves.
C. Student C: Because computers follow instructions step by step.
D. Student D: Because computers can learn from mistakes without instructions.

Correct Answer: C. Student C: Because computers follow instructions step by step.

Explanation: Computers follow the step-by-step instructions given by a program. They do not understand meaning like humans unless instructions are provided.

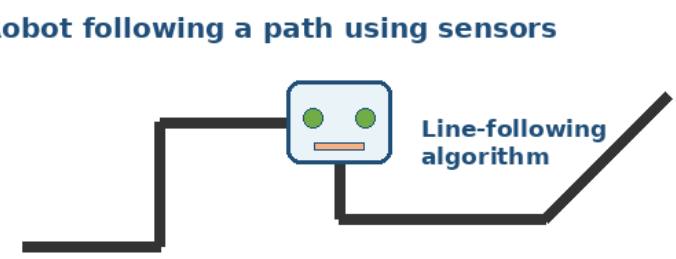
Q19 **A game developer is making a racing game. When the player presses the up key, the car should move forward. However, instead of moving forward, the car moves backward. What is the likely mistake?**

A. The up key is not connected
B. The program mistakenly sets the direction as negative instead of positive
C. The car is not designed to move forward
D. The keyboard is broken

Correct Answer: B. The program mistakenly sets the direction as negative instead of positive

Explanation: If a direction or movement value is reversed, the object may move backward instead of forward.

Q20 **If you want a robot to follow a specific path on the floor using sensors, which concept should be used?**



A. Loops
B. Conditionals
C. Event Handling
D. Line Following Algorithm

Correct Answer: D. Line Following Algorithm

Explanation: A line-following algorithm uses sensor input to help a robot stay on a marked path.

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Section: Coding Project Steps

Question block with answer and explanation

Q21

Which of the following is the correct sequence of steps in a coding project?

A. Write Code -> Test -> Plan -> Debug
B. Plan -> Write Code -> Test -> Debug
C. Debug -> Write Code -> Plan -> Test
D. Test -> Plan -> Debug -> Write Code

Correct Answer: B. Plan -> Write Code -> Test -> Debug

Explanation: A good project process begins with planning, then writing code, testing it, and debugging errors.

Q22

A loop that never stops running is called a:

A. Infinite Loop
B. Finite Loop
C. Conditional Loop
D. Iterative Loop

Correct Answer: A. Infinite Loop

Explanation: An infinite loop keeps running because it does not reach a proper stopping condition.

Q23

What is the correct way to store a number in a variable named score in Scratch?

A. score = "Hello"
B. set score to 10
C. print(score)
D. loop score = 5

Correct Answer: B. set score to 10

Explanation: In Scratch-style block coding, a variable can be assigned a value using a block such as set score to 10.

Q24

What does an if-else statement do in programming?

A. It repeats a block of code forever
B. It stores data in memory
C. It makes decisions based on conditions
D. It stops a program immediately

Correct Answer: C. It makes decisions based on conditions

Explanation: An if-else statement lets the program choose between actions depending on whether a condition is true or false.

Q25 **Which of the following is NOT a common basic data type?**

A. String
B. Integer
C. Logic
D. Boolean

Correct Answer: C. Logic

Explanation: String, integer, and Boolean are common beginner-level data types. Logic is a concept, not usually listed as a basic data type.

Q26 **If a robot moves forward by 3 steps and then turns left, how many left turns will it make to face the original direction after 4 repetitions?**

A. 1
B. 2
C. 3
D. 4

Correct Answer: D. 4

Explanation: Each repetition includes one left turn. Four left turns complete a full rotation and face the original direction again.

Q27 **Debugging is an important part of coding because:**

A. It helps find and fix errors in code
B. It adds new features to programs
C. It makes computers faster
D. It creates new programming languages

Correct Answer: A. It helps find and fix errors in code

Explanation: Debugging improves a program by finding and fixing mistakes that stop it from working correctly.

Q28 **What will be the output of this logic?**

```
IF number is even THEN
   Print "Even Number"
ELSE
   Print "Odd Number"
If the number is 9, what will the program display?
```

A. Even Number
B. Odd Number
C. 9
D. Error

Correct Answer: B. Odd Number

Explanation: 9 is not divisible by 2, so it is odd and the program displays Odd Number.

Q29 **A game developer wants to make a character jump when the space key is pressed. What should the code include?**

A. A loop to repeat the jump forever
B. A conditional statement checking if the space key is pressed
C. A command to change the color of the character
D. A function that resets the game

Correct Answer: B. A conditional statement checking if the space key is pressed

Explanation: The program should check whether the space key is pressed and then run the jump action.

Q30 **A student wrote a program where a car should move when the right arrow key is pressed, but instead, it moves left. What is the most likely error?**

A. The car has a flat tire
B. The program is using the wrong key event or movement direction
C. The computer screen is flipped
D. The program has no errors

Correct Answer: B. The program is using the wrong key event or movement direction

Explanation: The program may be checking the wrong key or using the wrong movement direction, so the car moves left instead of right.

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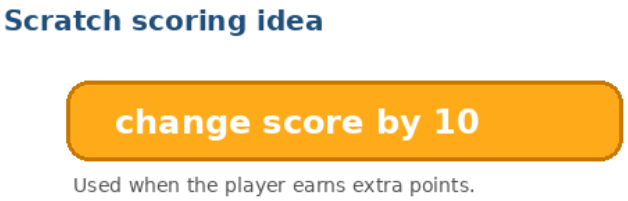
Section: Achievers Section

Question block with answer and explanation

Q31

In a racing game, a player should gain 10 points when they cross the finish line. Which block in Scratch should be used to add 10 points to the score?



A. set score to 10
B. change score by 10
C. add 10
D. reset score

Correct Answer: B. change score by 10

Explanation: The change score by 10 block increases the existing score by 10. Setting score to 10 would replace the score instead of adding to it.

Q32

A programmer is designing a game where a cat should stop moving when it touches a red object. What coding concept should be used?

A. Loops
B. Variables
C. Conditional Statements
D. Functions

Correct Answer: C. Conditional Statements

Explanation: A conditional statement can check whether the cat is touching the red object. If true, the movement can stop.

Q33

A student wrote the following Scratch-style script. What will this program do when the sprite touches an edge?

```
When Green Flag Clicked
Move 10 Steps
If touching edge then
   Move -10 Steps
```

A. The character will never move
B. The character will move forward and then backward when it touches an edge
C. The character will teleport to a random position
D. The program will crash

Correct Answer: B. The character will move forward and then backward when it touches an edge

Explanation: The sprite first moves 10 steps. If it touches the edge, Move -10 Steps moves it back.

Q34	**In Scratch, which block should you use to start a game when you want the program to begin when the green flag is clicked?** A. When Green Flag Clicked B. When Space Key Pressed C. Forever D. Wait **Correct Answer: A. When Green Flag Clicked** Explanation: The When Green Flag Clicked block is an event block used to start scripts when the green flag is clicked.

Q35	**Find the error in the following Python code:**
	`if x > 5`
	`    print("x is greater than 5")`
	A. There is no error; it works perfectly
	B. The code is missing a colon after the if condition
	C. The print function is used incorrectly
	D. The variable x should be in quotes
	Correct Answer: B. The code is missing a colon after the if condition
	Explanation: In Python, an if statement header must end with a colon before the indented block. The corrected line is: if x > 5:

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Complete Answer Key

SCO International Coding Olympiad - Class 3 - Set A - 2025-26

Q.No.	Answer	Q.No.	Answer	Concept Area
1	**B**	2	**C**	Fundamentals of Coding
3	**B**	4	**A**	Fundamentals of Coding
5	**C**	6	**D**	Fundamentals of Coding
7	**A**	8	**C**	Fundamentals of Coding
9	**D**	10	**B**	Fundamentals of Coding
11	**C**	12	**B**	Simple Game and Animation Basics
13	**B**	14	**A**	Simple Game and Animation Basics
15	**B**	16	**B**	Simple Game and Animation Basics
17	**D**	18	**C**	Problem Solving and Debugging
19	**B**	20	**D**	Problem Solving and Debugging
21	**B**	22	**A**	Coding Project Steps
23	**B**	24	**C**	Coding Project Steps
25	**C**	26	**D**	Coding Project Steps
27	**A**	28	**B**	Coding Project Steps
29	**B**	30	**B**	Coding Project Steps
31	**B**	32	**C**	Achievers Section
33	**B**	34	**A**	Achievers Section
35	**B**			Achievers Section

Section-wise Learning Summary

Quick glance for students, teachers, and schools

Section	Question Range	Learning Focus
Fundamentals of Coding	Q1-Q10	Programming language purpose, input/output devices, loops, algorithms, flowcharts, debugging, variables, and logic words.
Simple Game and Animation Basics	Q11-Q15	Sprites, movement keys, hiding/showing objects, animation speed, frame rate, and game conditions.
Problem Solving and Debugging	Q16-Q20	Connected blocks, pseudocode logic, instructions, direction errors, and sensor-based path following.
Coding Project Steps	Q21-Q30	Project planning, loops, variable assignment, if-else decisions, data types, robot turns, and debugging purpose.
Achievers Section	Q31-Q35	Scratch scoring, conditional stopping, edge response, green-flag event blocks, and Python colon syntax.