



SCO INTERNATIONAL CODING OLYMPIAD CLASS 6 SAMPLE PAPER

Official Question Paper Set B

Official SCO cover format with academic, PDF-ready question layout.

- Designed for Class 6 learners building programming, web and game-development foundations.
- Compact question numbering, clean question blocks, answer key and explanations for website download.
- Aligned to age-appropriate computational thinking, algorithms, HTML/CSS, Python/Java concepts and safe web practices.

Intro Programming	Python	Java	HTML	Game Basics	
Algorithms	Web Basics	Debugging	Data Thinking	SCO	

Section 1 - Intro to Programming

Q1. Which of the following is NOT a feature of Python?

- A. Dynamically typed
- B. Interpreted language
- C. Statically typed
- D. Object-oriented

Q2. Which of the following is true about Java?

- A. Java is an interpreted language
- B. Java programs are compiled into bytecode
- C. Java does not support object-oriented programming
- D. Java is only used for web development

Q3. What is the correct HTML element for inserting an image?

- A. `<image src="url">`
- B. ``
- C. `<src img="url">`
- D. `<picture src="url">`

Q4. Which of these is a difference between Python and Java?

- A. Python is a compiled language, Java is interpreted
- B. Python does not support object-oriented programming, Java does
- C. Python uses indentation for code blocks, Java uses curly braces
- D. Java is easier to learn than Python

Q5. Which of the following is the correct syntax to create a function in Python?

- A. `def myFunction[]`
- B. `create myFunction()`
- C. `function myFunction()`
- D. `def myFunction():`

Q6. Which HTML tag is used to create a hyperlink?

- A. ``
- B. `<link href="url">`
- C. `<hyperlink href="url">`
- D. `<url>url</url>`

Q7. What does CSS stand for?

- A. Computer Style Sheets
- B. Color Style Sheets
- C. Cascading Style Sheets
- D. Cascading Script Sheets

Q8. Which of these is a valid Java variable declaration?

- A. `int 5x = 10;`
- B. `int x = 5;`
- C. `5int x = 10;`

D. `int x = "hello";`

Q9. What will the following Python code output? `print(2 * "Hello")`

- A. HelloHello
- B. Hello 2
- C. Hello
- D. Hello Hello

Q10. Which of the following is used to apply style to an HTML element?

- A. `<style>`
- B. `<css>`
- C. `<script>`
- D. `<class>`

Section 2 - Basic Coding Applications

Q11. In Python, what is the output of the following code: `x = 5; print(x == 5)`?

- A. True
- B. False
- C. 5
- D. Error

Q12. Which of these data types is used to store a true/false value in Java?

- A. int
- B. String
- C. boolean
- D. char

Q13. In Python, which of these statements will result in an error?

- A. `x = 5`
- B. `y = "Hello"`
- C. `x = "Hello" + 5`
- D. `z = True`

Q14. What is the output of the following Python code? `for i in range(1, 5): print(i)`

- A. 1 2 3 4
- B. 0 1 2 3 4
- C. 1 2 3
- D. Error

Q15. Which of the following is used in CSS to apply a color to text?

- A. `color: red;`
- B. `text-color: red;`
- C. `font-color: red;`
- D. `background-color: red;`

Q16. What does the following Python code do? `x = [1, 2, 3]; x.append(4)`

- A. Adds 4 to the start of the list
- B. Adds 4 to the end of the list
- C. Replaces 4 in the list
- D. Creates a new list with 4 elements

Q17. Which tag is used in HTML to create a list?

- A. <list>
- B.
- C.
- D.

Q18. Which Java method is used to print output to the console?

- A. `System.print()`
- B. `console.log()`
- C. `System.out.print()`
- D. `print()`

Q19. In CSS, which property is used to change the font size?

- A. font-size
- B. size
- C. text-size
- D. font-style

Q20. In HTML, which tag is used to create a form?

- A. <input>
- B. <form>
- C. <button>
- D. <action>

Section 3 - Game Development Basics

Q21. Which programming language is widely used for game development, especially for beginners?

- A. JavaScript
- B. Python
- C. Java
- D. C++

Q22. In Scratch, which block is used to detect if the sprite is touching another sprite?

- A. If touching [sprite]
- B. Touching color
- C. Touching edge
- D. If key pressed

Q23. What is a sprite in a game development context?

- A. The background image
- B. The code that controls the game mechanics
- C. A character or object that can be controlled or moved in the game
- D. A variable used to store the score

Q24. In Scratch, which block can be used to make a sprite move to a specific position?

- A. Go to [x: 10, y: 20]
- B. Move 10 steps
- C. Point towards [sprite]
- D. Change x by 10

Q25. Which game development tool is specifically designed for creating games with no prior coding experience?

- A. Unity
- B. Unreal Engine
- C. GameMaker Studio
- D. Scratch

Q26. Which algorithm is commonly used to generate random numbers in games?

- A. Bubble sort
- B. Linear search
- C. Pseudorandom number generator
- D. Merge sort

Q27. What does the term "collision detection" refer to in game development?

- A. Detecting when the player reaches the goal
- B. Checking if two objects (sprites) overlap or touch
- C. Counting the number of points
- D. Detecting when the player wins

Q28. Which of these is the primary function of the game loop?

- A. To move the player's character
- B. To generate random levels
- C. To continuously update game elements, such as movement and score
- D. To end the game

Q29. In Scratch, how can you make a sprite perform an action repeatedly?

- A. Repeat [number of times]
- B. Forever
- C. When flag clicked
- D. Change [variable] by

Q30. Which of the following is an example of an event-driven programming concept in game development?

- A. For loops
- B. While loops
- C. When a key is pressed
- D. Random number generation

Section 4 - Achievers Section

Q31. What is the output of this Python code: `x = [1, 2, 3]; x[0], x[2] = x[2], x[0]; print(x)`

- A. [3, 2, 1]
- B. [1, 2, 3]
- C. [2, 1, 3]
- D. [3, 2, 2]

Q32. Which Java method is used to convert a string to an integer?

- A. `parseInt()`
- B. `toInteger()`
- C. `int()`
- D. `stringToInt()`

Q33. What will be the result of the following Python code?

```
print(round(10 / 3, 2))
```

- A. 3
- B. 3.0
- C. 3.33
- D. Error

Q34. What is the output of the following code: `if 10 > 5: print("Yes") else: print("No")`

- A. Yes
- B. No
- C. Error
- D. Yes No

Q35. In which of the following cases will a Java `NullPointerException` occur?

- A. Assigning a value to an uninitialized variable
- B. Accessing an object that has not been instantiated
- C. Declaring a variable without assigning a value
- D. None of the above

Q36. In CSS, how do you select an element with an ID of header?

- A. `.header`
- B. `#header`
- C. `header`
- D. `*header*`

Q37. Which of the following will generate a random number between 1 and 10 in Python?

- A. `random(1, 10)`
- B. `random.randint(1, 10)`
- C. `random.range(1, 10)`
- D. `rand(1, 10)`

Q38. What is the purpose of a `break` statement in a loop?

- A. It exits the loop immediately
- B. It skips the current iteration and moves to the next one

- C. It continues the loop without any change
- D. It stops the program execution

Q39. Which of these belongs mainly to CSS, not HTML?

- A. Creating a paragraph
- B. Setting the color of text
- C. Inserting an image
- D. Creating a hyperlink

Q40. Which statement is true about Python's while loop?

- A. The loop runs once
- B. The loop runs only if the condition is true
- C. The loop runs only if the condition is false
- D. The loop runs an infinite number of times

Q41. In Python, what will the following code output?

```
def func(x, y):  
    return x * y  
print(func(3, 4))
```

- A. 7
- B. 12
- C. 34
- D. Error

Q42. Which statement is true about the for loop in Python?

- A. It is used to iterate over a sequence or a range
- B. It always runs forever
- C. It cannot be used with strings
- D. It is used only for numbers

Q43. Which Java code correctly declares an array of five integers?

- A. `int arr = new int[5];`
- B. `int arr[] = {1, 2, 3, 4, 5};`
- C. `int arr[5] = {1, 2, 3, 4, 5};`
- D. `int[] arr = new int[5];`

Q44. In CSS, which property is used to set the background color of an element?

- A. `color`
- B. `background-color`
- C. `bgcolor`
- D. `color-background`

Q45. Which Python code creates a list of squares from 1 to 5?

- A. `squares = [x * 2 for x in range(1, 6)]`
- B. `squares = [x**2 for x in range(1, 6)]`
- C. `squares = range(1, 6)**2`
- D. `squares = [x + 2 for x in range(1, 6)]`

Answer Key

Q	Ans	Correct Option
1	C	Statically typed
2	B	Java programs are compiled into bytecode
3	B	<code></code>
4	C	Python uses indentation for code blocks, Java uses curly braces
5	D	<code>def myFunction():</code>
6	A	<code></code>
7	C	Cascading Style Sheets
8	B	<code>int x = 5;</code>
9	A	HelloHello
10	A	<code><style></code>
11	A	True
12	C	boolean
13	C	<code>x = "Hello" + 5</code>
14	A	1 2 3 4
15	A	<code>color: red;</code>
16	B	Adds 4 to the end of the list
17	B	<code></code>
18	C	<code>System.out.print()</code>
19	A	font-size
20	B	<code><form></code>
21	B	Python
22	A	If touching [sprite]
23	C	A character or object that can be controlled or moved in the game
24	A	Go to [x: 10, y: 20]
25	D	Scratch
26	C	Pseudorandom number generator
27	B	Checking if two objects (sprites) overlap or touch
28	C	To continuously update game elements, such as movement and score
29	B	Forever
30	C	When a key is pressed
31	A	[3, 2, 1]
32	A	<code>parseInt()</code>
33	C	3.33
34	A	Yes
35	B	Accessing an object that has not been instantiated
36	B	<code>#header</code>
37	B	<code>random.randint(1, 10)</code>
38	A	It exits the loop immediately
39	B	Setting the color of text
40	B	The loop runs only if the condition is true
41	B	12
42	A	It is used to iterate over a sequence or a range
43	D	<code>int[] arr = new int[5];</code>
44	B	<code>background-color</code>
45	B	<code>squares = [x**2 for x in range(1, 6)]</code>

Detailed Explanations

Q1. Answer C: **Statically typed**

Python is dynamically typed, not statically typed.

Q2. Answer B: **Java programs are compiled into bytecode**

Java is compiled into bytecode, which runs on the Java Virtual Machine (JVM).

Q3. Answer B: ****

The tag is used to insert an image, and the src attribute specifies the image URL.

Q4. Answer C: **Python uses indentation for code blocks, Java uses curly braces**

Python uses indentation for code blocks, while Java uses curly braces {}.

Q5. Answer D: **def myFunction():**

The correct syntax for defining a function in Python is def function_name():.

Q6. Answer A: ****

The <a> tag is used to create hyperlinks, and the href attribute specifies the destination URL.

Q7. Answer C: **Cascading Style Sheets**

CSS stands for Cascading Style Sheets and is used for styling HTML elements.

Q8. Answer B: **int x = 5;**

int x = 5; is the correct syntax for declaring an integer variable in Java.

Q9. Answer A: **HelloHello**

The string "Hello" is repeated twice, so the output is HelloHello.

Q10. Answer A: **<style>**

The <style> tag is used to define CSS styles directly within an HTML document.

Q11. Answer A: **True**

The == operator checks if the value of x is equal to 5, which is true.

Q12. Answer C: **boolean**

The boolean data type is used to store true or false values in Java.

Q13. Answer C: **x = "Hello" + 5**

You cannot concatenate a string and an integer directly in Python, which results in a TypeError.

Q14. Answer A: **1 2 3 4**

The range(1, 5) function generates numbers from 1 to 4.

Q15. Answer A: **color: red;**

The color property is used to change the color of the text in CSS.

Q16. Answer B: **Adds 4 to the end of the list**

The append() method adds an element to the end of the list.

Q17. Answer B: ****

The tag is used for an unordered list in HTML.

Q18. Answer C: **System.out.print()**

System.out.print() is the correct method in Java to print output to the console.

Q19. Answer A: **font-size**

The font-size property is used to change the size of text in CSS.

Q20. Answer B: **<form>**

The <form> tag is used to create a form in HTML.

Q21. Answer B: **Python**

Python is often recommended for beginners, especially for game development with libraries like Pygame.

Q22. Answer A: **If touching [sprite]**

The If touching [sprite] block checks if a sprite is in contact with another sprite.

Q23. Answer C: A character or object that can be controlled or moved in the game

A sprite is a visual object or character that moves or interacts in the game.

Q24. Answer A: Go to [x: 10, y: 20]

The Go to [x: 10, y: 20] block moves the sprite to a specific position.

Q25. Answer D: Scratch

Scratch is designed for beginners, allowing easy game creation without prior coding knowledge.

Q26. Answer C: Pseudorandom number generator

A pseudorandom number generator creates random values based on a seed.

Q27. Answer B: Checking if two objects (sprites) overlap or touch

Collision detection refers to checking if two objects in the game collide or touch.

Q28. Answer C: To continuously update game elements, such as movement and score

The game loop continuously updates game elements, running until the game ends.

Q29. Answer B: Forever

The Forever block is used to repeat actions continuously until the program is stopped.

Q30. Answer C: When a key is pressed

Event-driven programming responds to events, like when a key is pressed.

Q31. Answer A: [3, 2, 1]

The first and third elements of the list are swapped.

Q32. Answer A: parseInt()

The parseInt() method converts a string to an integer.

Q33. Answer C: 3.33

In Python 3, $10 / 3$ produces a decimal value. The round(..., 2) function rounds it to 3.33.

Q34. Answer A: Yes

Since $10 > 5$ is true, the output is Yes.

Q35. Answer B: Accessing an object that has not been instantiated

A NullPointerException occurs when you try to access or manipulate an object that is null.

Q36. Answer B: #header

In CSS, #header is used to select an element with the id="header".

Q37. Answer B: random.randint(1, 10)

random.randint(1, 10) generates a random integer between 1 and 10.

Q38. Answer A: It exits the loop immediately

The break statement immediately exits the loop when it is encountered.

Q39. Answer B: Setting the color of text

HTML structures content, while CSS is used to control visual presentation such as text color.

Q40. Answer B: The loop runs only if the condition is true

A while loop continues running as long as the condition is true.

Q41. Answer B: 12

The function multiplies 3 by 4, so the result is 12.

Q42. Answer A: It is used to iterate over a sequence or a range

A for loop can iterate over ranges, lists, strings and other iterable objects.

Q43. Answer D: int[] arr = new int[5];

The standard Java syntax for declaring an integer array of size five is `int[] arr = new int[5];`.

Q44. Answer B: background-color

The CSS property background-color sets the background color of an element.

Q45. Answer B: squares = [x2 for x in range(1, 6)]**

The expression `x**2` calculates the square of x for each number from 1 to 5.