GRADE 3

DATE: 25 AUGUST 2025

TIME: 60 MINUTES

INSTRUCTIONS:

1. This booklet consists out of multiple-choice questions, true or false, computational questions, practical and problem-solving questions.
2. The total of this booklet is out of fifty marks.
3. You have 60 minutes for the paper.
4. Read the questions carefully before answering.
5. Visit the website: www.saolympiads.co.za.

NAME OF LEARNER:	
SCHOOL:	**GRADE:**

SECTION A: MULTIPLE CHOICE QUESTIONS

1. What is an algorithm? (1)

   A. A type of robot
   B. A rule in a game
   C. A step-by-step instruction to complete a task
   D. A part of the computer

2. What does a computer program do? (1)

   A. It draws pictures
   B. It follows instructions to perform tasks
   C. It fixes broken computers
   D. It plays music automatically

3. Which of the following is a tool to input information into a computer? (1)

   A. Printer
   B. Speaker
   C. Keyboard
   D. Screen

4. What is the role of a loop in a computer program? (1)

   A. To stop the computer from working
   B. To repeat a set of instructions
   C. To save a document
   D. To create a new file

5. What is debugging in programming? (1)

   A. Creating bugs or viruses
   B. Fixing problems in a program
   C. Making the program faster
   D. Designing new games

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6. Which device can be programmed to follow instructions? (1)

   A. A book
   B. A robot
   C. A lamp
   D. A chair

7. What does it mean to 'execute' a program?? (1)

   A. To delete the program
   B. To print the program
   C. To run the program on a computer
   D. To draw the program on paper

8. What is the Internet used for in coding and robotics? (1)

   A. To send emails only
   B. To find information and communicate
   C. To color pictures
   D. To play offline games

9. What is than example of an output device? (1)

   A. Mouse
   B. Keyboard
   C. Monitor
   D. USB drive

10. Which of these is a basic programming action in Scratch? (1)

    A. Writing a letter
    B. Drawing a picture
    C. Moving a sprite
    D. Reading a book

11. What is a sprite in Scratch? (1)

A. A type of code
B. A character or object you can program
C. A tool to draw pictures
D. A button on the keyboard

12. Why do we use variables in Scratch? (1)

A. To store and change data during a program
B. To make the program colorful
C. To fix errors
D. To control the volume

13. What does the green flag do in Scratch? (1)

A. It stops the program
B. It saves the project
C. It starts the program
D. It deletes the project

14. Which block in Scratch can be used to repeat actions? (1)

A. Turn block
B. Repeat block
C. Stop block
D. Hide block

15. How do you make a sprite speak in Scratch? (1)

A. By shaking the computer
B. By using a 'say' block
C. By drawing a mouth
D. By pressing the spacebar

16. What is the primary use of the Internet in school? (1)

A. Playing games
B. Researching information
C. Chatting with friends
D. Watching TV

17. What is an example of using technology responsibly? (1)

A. Leaving the computer on all day
B. Sharing your passwords with friends
C. Using the computer to do homework
D. Downloading games without permission

18. What does it mean to program a robot? (1)

A. To play with the robot
B. To charge its batteries
C. To give it instructions to follow
D. To paint the robot

19. Which is a safe practice while using the Internet? (1)

A. Sharing personal information
B. Clicking on every pop-up ad
C. Using strong passwords
D. Downloading files from unknown websites

20. Why is teamwork important in robotics? (1)

A. It allows robots to work alone
B. It makes it harder to build robots
C. It helps share ideas and improve designs
D. It lets one person do all the work

(20)

SECTION B: TRUE OR FALSE STATEMENTS

1. An algorithm is a type of computer hardware used to process data. (1)

   A. True
   B. False

2. In Scratch, the green flag is used to start the program. (1)

   A. True
   B. False

3. Variables in Scratch can be used to store numbers, text, or other information while a program is running. (1)

   A. True
   B. False

4. The main purpose of debugging is to make a program run faster. (1)

   A. True
   B. False

5. Using strong passwords is an unsafe practice while using the Internet. (1)

   A. True
   B. False

(5)

SECTION C: COMPUTATIONAL

1. Create a Scratch project where a sprite greets the user with a "Hello" message and then moves across the screen. (5)

'move 10 steps' block	'say 'Hello' for 2 seconds' block
'wait 1 second' block	'turn 15 degrees' block
	'when green flag clicked' block

2. Program a Scratch project to help users learn the correct sequence of a simple morning routine: brushing teeth, getting dressed. (5)

‘when green flag clicked’ block	‘if <answer = "brush teeth">’ block
‘say "Correct! Now get dressed!"’ block	‘say "Try again! We start by brushing teeth."’ block
‘ask "What is the first thing we do in the morning?" and wait’ block	‘else’ block

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3. Create a sprite that acts like a pet which reacts when it is clicked. (5)

‘when this sprite clicked’ block	‘change colour effect by 25’ block
‘wait’ block	‘repeat 5 times’ block
‘play sound [meow or bark] block	‘say "Pet me more!" for 2 seconds’ block
	‘when green flag clicked’ block

4. Program a game where the sprite counts from 1 to 10 out loud. (5)

'repeat 10 times' block	'wait 0.05 seconds' block
'say (current loop count) for 1 second' block	'when green flag clicked' block
'stop' block	'go to x:0 y:0' block
'change colour effect by 10' block	

5. Create a simple animation where three sprites dance on the stage when a key is pressed. (5)

'forever' block	'when green flag clicked' block
'each sprite: move 15 steps' block	'If key [space] pressed then' block
'each sprite: turn 15 degrees' block	

TOTAL = 50 MARKS