

EDUSAMBAM ASSESSMENT SERIES

What Is an Algorithm?

PRINTABLE PRACTICE WORKSHEET

EDUSAMBAM, working on building your Foundational Concepts. Visit edusambam.com for Auto-graded Self-assessment Experience.

YOUR PHYSICAL & ONLINE SELF-ASSESSMENT ROADMAP

PHYSICAL

1

Download any practice test



2

Solve within assigned time



3

Submit it to your Teacher/Examiner



4

Get assessed and improve

ONLINE

1

Visit edusambam.com



2

Open Assessment Arena



3

Solve online papers



4

Get auto-assessed and improve

Candidate Name:		Roll No.:	
Class / Grade:		Date:	
School / Institution:		Test Centre:	

Subject	Computer Fundamentals	Topic	What Is an Algorithm?	Total Marks	100
Total Questions	45	Time Allowed	1 Hour (60 minutes)	Version	A

GENERAL INSTRUCTIONS

1. Read each question carefully before answering.
2. For Section A and Section B, mark one answer only.
3. For Sections C and E, write your answer clearly in the space provided.
4. For Section D, write the correct letter from Column B against each item in Column A.
5. Do not use correction fluid. Keep all answers clear and legible.
6. This worksheet is prepared from the EDUSAMBAM practice assessment supplied for this paper.

PAPER PATTERN

Section	Questions	Marks Each	Total
Section A — Multiple Choice	15	2	30
Section B — True / False	10	2	20
Section C — Fill in the Blank	10	2	20
Section D — Column Matching	5 pairs	2	10
Section E — Short Answer	5	4	20
Total	45	—	100

Section A — Multiple Choice

30 marks

1. An algorithm is best described as:

- A.** A random collection of numbers
C. A type of computer hardware

Answer: ☐A ☐B ☐C ☐D

- B.** A step-by-step set of instructions to solve a problem or complete a task
D. A programming language

Basic • 2 pts

2. Which of these is an everyday example of an algorithm?

- A.** A recipe with step-by-step cooking instructions
C. A song with no lyrics

Answer: ☐A ☐B ☐C ☐D

- B.** A photograph
D. A blank page

Basic • 2 pts

3. Algorithms are important in computing because they:

- A.** Provide computers with clear steps to follow to solve problems
C. Have no practical use

Answer: ☐A ☐B ☐C ☐D

- B.** Are only used by artists
D. Replace the need for programming

Basic • 2 pts

4. A flowchart is often used to:

- A.** Visually represent the steps of an algorithm
C. Replace a keyboard

Answer: ☐A ☐B ☐C ☐D

- B.** Store data permanently
D. Power a computer

Basic • 2 pts

5. Pseudocode is:

- A.** A simplified, informal way of writing out an algorithm's logic before coding it
C. A programming language itself

Answer: ☐A ☐B ☐C ☐D

- B.** A type of computer virus
D. A hardware component

Intermediate • 2 pts

6. A "sequence" in an algorithm refers to: A. Steps carried out one after another in order C. Skipping all steps Answer: ☐ A ☐ B ☐ C ☐ D	B. Repeating a step forever D. Random step order	Intermediate • 2 pts
7. "Selection" in an algorithm refers to: A. Making a decision that leads to different paths, like an if/else choice C. Ignoring all conditions Answer: ☐ A ☐ B ☐ C ☐ D	B. Always doing the same thing D. Deleting the algorithm	Intermediate • 2 pts
8. "Iteration" (or a loop) in an algorithm refers to: A. Repeating a set of steps multiple times C. Only running once and stopping Answer: ☐ A ☐ B ☐ C ☐ D	B. Never repeating any step D. Skipping steps randomly	Intermediate • 2 pts
9. An efficient algorithm is one that: A. Solves a problem correctly using reasonable time and resources C. Ignores the correct answer Answer: ☐ A ☐ B ☐ C ☐ D	B. Always takes the longest possible time D. Uses unlimited resources with no concern for speed	Intermediate • 2 pts
10. Debugging an algorithm means: A. Finding and fixing errors in its logic or steps C. Making it run slower on purpose Answer: ☐ A ☐ B ☐ C ☐ D	B. Deleting the entire algorithm D. Ignoring all errors	Intermediate • 2 pts
11. A search algorithm is designed to: A. Find a specific item or piece of information within a data set C. Only store images Answer: ☐ A ☐ B ☐ C ☐ D	B. Only delete data D. Power a monitor	Intermediate • 2 pts
12. A sorting algorithm is designed to: A. Arrange data in a particular order, such as ascending or descending C. Erase data completely Answer: ☐ A ☐ B ☐ C ☐ D	B. Only find data D. Encrypt data only	Advanced • 2 pts
13. Which of these best describes "thinking like a computer" when designing an algorithm? A. Breaking a problem into small, precise, unambiguous steps C. Skipping the planning stage entirely Answer: ☐ A ☐ B ☐ C ☐ D	B. Guessing randomly until it works D. Avoiding all logical structure	Advanced • 2 pts
14. Algorithms can be written in different forms, including: A. Plain language, flowcharts, or pseudocode C. Only images Answer: ☐ A ☐ B ☐ C ☐ D	B. Only binary code D. Only spoken word	Advanced • 2 pts
15. GPS navigation apps use algorithms to: A. Calculate the fastest or shortest route between locations C. Take photographs Answer: ☐ A ☐ B ☐ C ☐ D	B. Play music D. Charge the phone battery	Advanced • 2 pts

Section B — True / False

20 marks

16. An algorithm is a step-by-step set of instructions used to solve a problem. A. True ☐ B. False ☐	Basic • 2 pts
17. A recipe can be considered an everyday example of an algorithm. A. True ☐ B. False ☐	Basic • 2 pts
18. A flowchart is a visual way to represent the steps of an algorithm. A. True ☐ B. False ☐	Basic • 2 pts
19. Pseudocode is an official programming language that computers run directly. A. True ☐ B. False ☐	Basic • 2 pts
20. A sequence in an algorithm means steps are carried out one after another in order. A. True ☐ B. False ☐	Intermediate • 2 pts
21. Selection in an algorithm means always following the exact same path with no decisions. A. True ☐ B. False ☐	Intermediate • 2 pts

22. Iteration means repeating a set of steps multiple times.
A. True ☐ **B.** False ☐

23. An efficient algorithm solves a problem correctly using reasonable time and resources.
A. True ☐ **B.** False ☐

24. Debugging means finding and fixing errors in an algorithm's logic.
A. True ☐ **B.** False ☐

25. Sorting algorithms are used to arrange data in a specific order.
A. True ☐ **B.** False ☐

Intermediate • 2 pts

Intermediate • 2 pts

Intermediate • 2 pts

Intermediate • 2 pts

Section C — Fill in the Blank

20 marks

26. A step-by-step set of instructions to solve a problem is called an _____.
Answer: _____

27. A visual diagram used to represent the steps of an algorithm is called a _____.
Answer: _____

28. An informal way of writing out an algorithm's logic before coding it is called _____.
Answer: _____

29. Carrying out steps one after another in order is called _____ in an algorithm.
Answer: _____

30. Making a decision that leads to different paths in an algorithm is called _____.
Answer: _____

31. Repeating a set of steps multiple times in an algorithm is called _____, or a loop.
Answer: _____

32. Finding and fixing errors in an algorithm's logic is called _____.
Answer: _____

33. An algorithm designed to find a specific item in a data set is called a _____ algorithm.
Answer: _____

34. An algorithm designed to arrange data in a specific order is called a _____ algorithm.
Answer: _____

35. Breaking a problem into small, precise, unambiguous steps reflects "thinking like a _____."
Answer: _____

Basic • 2 pts

Basic • 2 pts

Basic • 2 pts

Basic • 2 pts

Intermediate • 2 pts

Intermediate • 2 pts

Intermediate • 2 pts

Intermediate • 2 pts

Intermediate • 2 pts

Intermediate • 2 pts

Section D — Column Matching

10 marks

36-40. Match each term to its correct definition.

Column A	Answer	Column B
Algorithm	_____	A. Steps carried out one after another in order
Flowchart	_____	B. A decision that leads to different paths
Sequence	_____	C. Repeating a set of steps multiple times
Selection	_____	D. A step-by-step set of instructions to solve a problem
Iteration	_____	E. A visual diagram representing the steps of a process

Section E — Short Answer

20 marks

41. What is an algorithm, and why is it important in computing?

42. Give an everyday example of an algorithm and explain why it qualifies as one.

Advanced • 4 pts

Advanced • 4 pts

43. Explain the difference between sequence, selection, and iteration in an algorithm.

Advanced · 4 pts

44. What does it mean to debug an algorithm?

Advanced · 4 pts

45. Why is efficiency important when designing an algorithm?

Advanced · 4 pts

Candidate Signature: _____ **Invigilator Signature:** _____

FOR OFFICE USE ONLY

Marks Obtained: _____ / 100

Checked By: _____

Result / Grade: _____

Date Checked: _____

EDUSAMBAM ASSESSMENT SERIES

What Is an Algorithm? — Answer Key

Teacher reference: equivalent grammatically correct wording is acceptable for open-ended items when the meaning is preserved.

Section A — Multiple Choice

- | | |
|------|-------|
| 1. B | 9. A |
| 2. A | 10. A |
| 3. A | 11. A |
| 4. A | 12. A |
| 5. A | 13. A |
| 6. A | 14. A |
| 7. A | 15. A |
| 8. A | |

Section B — True / False

- | | |
|-----------|-----------|
| 16. True | 21. False |
| 17. True | 22. True |
| 18. True | 23. True |
| 19. False | 24. True |
| 20. True | 25. True |

Section C — Fill in the Blank

- | | |
|----------------|---------------|
| 26. algorithm | 31. iteration |
| 27. flowchart | 32. debugging |
| 28. pseudocode | 33. search |
| 29. sequence | 34. sorting |
| 30. selection | 35. computer |

Section D — Column Matching

- | | |
|-------------------|-------------------|
| 36. Algorithm — D | 39. Selection — B |
| 37. Flowchart — E | 40. Iteration — C |
| 38. Sequence — A | |

Section E — Short Answer (Model Answers)

- 41.** step; instruction; solve; problem; order
- 42.** recipe; step; instruction; order; routine
- 43.** order; decision; repeat; loop; choice
- 44.** error; fix; find; mistake; correct
- 45.** time; resource; fast; speed; reasonable