

QB365 Question Bank Software Study Materials

Specification and Abstraction 50 Important 1 Marks Questions With Answers (Book Back and Creative)

11th Standard

Computer Science

Total Marks : 50

Multiple Choice Question

50 x 1 = 50

- 1) Which of the following activities is algorithmic in nature?
(a) Assemble a bicycle. (b) Describe a bicycle. (c) Label the parts of a bicycle. (d) Explain how a bicycle works.
- 2) Which of the following activities is not algorithmic in nature?
(a) Multiply two numbers (b) Draw a kolam (c) Walk in the park **(d) Swaping of two numbers**
- 3) Omitting details inessential to the task and representing only the essential features of the task is known as
(a) specification **(b) abstraction** (c) composition (d) decomposition
- 4) Stating the input property and the input-output relation a problem is known
(a) specification (b) statement (c) algorithm (d) definition
- 5) Ensuring the input-output relation is
(a) the responsibility of the algorithm and the right of the user.
(b) the responsibility of the user and the right of the algorithm.
(c) the responsibility of the algorithm but not the right of the user.
(d) the responsibility of both the user and the algorithm.
- 6) If $i = 5$ before the assignment $i := i - 1$ after the assignment, the value of i is
(a) 5 **(b) 4** (c) 3 (d) 2
- 7) If $0 < i$ before the assignment $i := i - 1$ after the assignment, we can conclude that
(a) $0 < i$ **(b) $0 \leq i$** (c) $i = 0$ (d) $0 \geq i$
- 8) Which of the following is(are) an example(s) of process?
(a) Getting ready to office in the morning (b) Drawing, 'Kolams' (c) Adding two numbers **(d) All of these**
- 9) Which of the following not used to construct algorithm?
(a) Data **(b) Process** (c) Control flow (d) Functions
- 10) Which of the following statement is true?
(a) Computational processes the state can not changes. (b) As a process evolves, the state can not changes.
(c) Variables are not named boxes for storing data. **(d) Assignment statement is used to store the value of variable.**
- 11) How many statements are there to alter the normal flow of control?
(a) 1 (b) 2 **(c) 3** (d) many
- 12) In which control flow, the statements are repeated until the condition becomes false?
(a) sequential (b) alternative control flow **(c) iterative** (d) all of these
- 13) Which of the following is not an algorithm design technique?
(a) Specification (b) Abstraction **(c) Control flow** (d) Composition

14) Which of the following design technique state the relation between the input and the output?

- (a) **Specification** (b) Abstraction (c) Composition (d) Decomposition

15) Decomposition means _____.

- (a) States the relation between the input and the output (b) Hiding unnecessary details
 (c) An algorithm is composed of assignment and control flow statement (d) **Dividing the main algorithm into functions**

16) Match the following

(a) Specification	(1) hiding the details
(b) Abstraction	(2) divide the main algorithm into functions
(c) Composition	(3) relation between the I/O
(d) Decomposition	(4) algorithm consists of control flow statements

(a)	(b)	(c)	(d)
i)ii)iii)iv)	i)ii)iii)iv)	i)ii)iii)iv)	i)ii)iii)iv)
1 4 2 3	3 1 4 2	4 1 3 2	1 4 3 2

17) How many standard specification format are there to design the algorithm?

- (a) **2** (b) 3 (c) 4 (d) 1

18) Which serves as a contract between the designer and users of the algorithm?

- (a) Abstraction (b) **Specification** (c) Composition (d) Decomposition

19) Which is the most effective tool used for managing program complexity _____.

- (a) Specification (b) Control flow (c) Composition (d) **none of these**

20) Who was a Hungarian Mathematician?

- (a) **G. Polya** (b) John Wiley (c) Krysia Broda (d) Steve Vickers

21) _____state the properties of the given input and the relation between the input and the output.

- (a) Composition (b) Abstraction (c) Decomposition (d) **Specification**

22) _____how many control flow statement are there to alter the control flow depending on the state?

- (a) 5 (b) 6 (c) **3** (d) 8

23) The data stored in a varibale is also called a_____.

- (a) process (b) data (c) **value** (d) constant

24) Initially the values of P and C are 4 and 5 respectively

-- P, C: = 4, 5

P: = C

C := P. Then find P and C

- (a) 4 and 4 (b) 5 and 4 (c) **5 and 5** (d) 4 and 5

25) What are the values of variable m and n after the assignments in line (1) and line (3)?

1. m, n: = 2,5

2. --m,n=?,?

3. m, n := m + 3, n - 1

4. -- m, n = ?, ?

- (a) 4,5 (b) **5,4** (c) 5,5 (d) 4,4

26) which one of the following is the equality operator?

(a) = (b) == (c) ++ (d) --

27) The values of the variables when the algorithm starts is _____.

(a) stage (b) initial stage (c) **initial state** (d) starting state

28) The values of the variables when the algorithm finishes is _____.

(a) final stage (b) **final state** (c) last stage (d) last state

29) Which one of the following is not a building block of algorithm _____.

(a) data (b) **state** (c) variables (d) functions

30) If the statements are executed one after the other, then it is _____ control flow.

(a) **Sequential** (b) iterative (c) selection (d) alternative

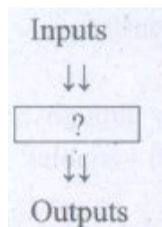
31) A _____ is like a sub algorithm

(a) **function** (b) data (c) variable (d) state

32) Which one of the following is not a technique for designing algorithms?

(a) specifications (b) abstraction (c) **encapsulation** (d) composition

33) Fill in the box given below figure.



(a) processing (b) solving (c) **algorithm** (d) functions

34) Identify the statement which is not true?

(a) An instruction describes an object (b) specification is one of the algorithm design techniques

(c) **An algorithm is a step by step sequence of instructions**

35) In multiple variable assignment statement, the number of variables and the number of expressions must _____.

(a) differ at least by 1 (b) not equal to 1 (c) equal to 0 (d) **be equal**

36) If the variable already has a value, and you are assigning a new value, what will happen to the old variable?

(a) retained (b) added (c) **lost** (d) becomes 0

37) Identify the correct statement

(a) **The first part of specification is name of the algorithm with input** (b) Second one is input properties with comments

(c) Third one is relation between input - output (d) All the three are correct statements

38) Find the wrong statement from the following

(a) **The state of a process can be represented by a set of variables in an algorithm**

(b) The state at any point of execution is simply the values of the variables at that point

(c) As the values of the variables are changed, the state remains constant. (d) As a process evolves, the state changes.

39) Which one of the following statements are used to annotate a program for the human readers?

(a) **comments** (b) state (c) variables (d) functions

40) How will be the input and output passed between an algorithm and the user?

(a) comments (b) Assignment (c) **Variable** (d) Functions

41) The goal of the algorithm is _____.

(a) to state the input properties (b) to state the output properties (c) to divide into functions

(d) to establish the input output relation

42) To construct _____ principles and techniques are required.

(a) program (b) code **(c) algorithm** (d) flow chart

43) Sequence of statements are called _____.

(a) flow chart **(b) algorithm** (c) construction (d) coding of program

44) Problem which is based _____.

(a) algorithm (b) programming (c) coding (d) state

45) Algorithm is _____ of statement.

(a) coding **(b) Sequence** (c) programming (d) set

46) When the algorithm starts is known as _____ state.

(a) final **(b) initial** (c) first (d) second

47) What must be expressed using statements of programming language?

(a) Data (b) variables (c) control flow **(d) algorithms**

48) Which of the following is important to get desired input and output relation?

(a) Abstraction (b) Specification **(c) Statement** (d) Algorithm

49) **Assertion (A):** Abstraction is the process of hiding irrelevant details and modeling a problem only by its essential feature.

Reason (R): If you do not abstract a problem adequately, we may deal with unnecessary details and complicate the solution.

(a) Both (A) and (R) are true and (R) is the correct explanation for A

(b) Both (A) and (R) are true, but (R) is not the correct explanation for A (c) A is true but R is false

(d) A is false, but R is true

50) Match the following:

1	Control flow	(i)	Part of an algorithm
2	Variable	(ii)	order of statements
3	Function	(iii)	provide instructions to perform operations on it
4	Data	(iv)	store the value

(a)

i	ii	iii	iv
1	2	4	3

(b)

i	ii	iii	iv
2	1	3	4

(c)

i	ii	iii	iv
2	4	1	3

(d)

i	ii	iii	iv
4	2	3	1