

Register No.: Name



SAINTGITS COLLEGE OF ENGINEERING KOTTAYAM, KERALA

(AN AUTONOMOUS COLLEGE AFFILIATED TO
APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

FIRST SEMESTER INTEGRATED M.C.A DEGREE EXAMINATION(R), MARCH 2021

Course Code: 20IMCAT105

Course Name: INTRODUCTION TO PROGRAMMING

Max. Marks: 60

Duration: 3 Hours

PART A

(Answer all questions. Each question carries 3 marks)

1. Explain the difference between Data and Information.
2. Explain the various symbols used in flowcharts.
3. What is an Algorithm?
4. What is Pseudocode? Explain with an example.
5. Write a Pseudocode to swap two numbers.
6. Write an algorithm to find the largest of three numbers.
7. Write an algorithm to check whether a number is positive, negative or zero.
8. Explain the working of For loop.
9. What is an array? Explain multi-dimensional array.
10. Write an algorithm to find the most repeated value in an array.

PART B

(Answer one full question from each module, each question carries 6 marks)

MODULE I

11. a) Explain the different types of flowcharts. (2)
b) Draw a flowchart to find the factorial of a number. (4)

OR

12. a) Explain the advantages of flowcharts. (2)
b) Draw a flowchart to generate Fibonacci series up to 1000. (4)

MODULE II

13. a) Explain arithmetic operators. (2)
b) Write an algorithm to implement all basic arithmetic operations. (4)

150A1

OR

- 14. a) Write a short note on logical operators. (2)
- b) Write an algorithm to check whether a given number is even or odd. (4)

MODULE III

- 15. a) Explain Sequence Structures in programming. (2)
- b) Write an algorithm to read any day number as number and display day name in the word. (4)

OR

- 16. a) Explain Decision Structures in programming. (3)
- b) Write an algorithm to determine whether a person is eligible to vote. (3)

MODULE IV

- 17. a) Write an algorithm to find the sum of digits of an integer. (3)
(Integer-14532, Sum = 1 + 4 + 5 + 3 + 2 = 15)
- b) Write an algorithm to print the following pattern. (3)

```
*  
*  *  
*  *  *
```

OR

- 18. a) Write an algorithm to print the following pattern. (3)

```
1  2  3  
1  2  
1
```
- b) Write an algorithm and draw a flowchart to print prime numbers between 1 and 100. (3)

MODULE V

- 19. Write an algorithm to copy the elements of one array into another array and remove the duplicate elements. (6)

OR

- 20. Write an algorithm to merge two arrays of same size sorted in descending order. (6)
