

**SOUTH EASTERN UNIVERSITY OF SRI LANKA**  
**FIRST EXAMINATION IN BACHELOR OF INFORMATION AND**  
**COMMUNICATION TECHNOLOGY - 2018/2019**  
**SEMESTER – I, AUGUST 2021**

**SWT11012 - Fundamentals of Programming**

**Answer all Questions.**

**Time Allowed: 02 hours.**

- Instructions:**
1. Strictly follow the rules and regulation given by the head of the department.
  2. Time allowed two hours
  3. Answer all questions on your paper
  4. Put the full and clear **signature**, **registration #** and exam **index #** on your all pages of answer script, including page no **before starting** the exam.
  5. Prepare the **pdf file** and upload it to LMS within 01-hour time given to you.
  6. There won't be **any extra time**, therefore don't wait until the last minute.

**Question 01:**

- a) What do you mean by structured programming? Explain basic constructs for structured programming.

(05 Marks)

- b) Explain the terms and differentiate between the terms (mention the relevant examples, diagram etc.)

- i. Fourth and Third, Generation Languages
- ii. First and Second, Generation Languages
- iii. Flow Chart and Algorithm
- iv. Top down and bottom-up approach of a programming
- v. Code and pseudocode.

(20 Marks)

**[25 Marks]**

**Question 02:**

- a) Draw an algorithm for;
- i. To find the maximum of any three numbers.
  - ii. To find the minimum of any three numbers.
  - iii. To find the value of multiplying the above a)i and a) ii, [Min x Max]
- (6 Marks)
- b) Draw the flow chart for the above **Question 02: a)** part.
- (4 Marks)
- c) Explain the structure of a 'C' program with a proper example.
- Note:** For the example part you must write about problem scenario that you are going to solve; then, algorithm, flow chart and finally C coding.
- (10 Marks)
- d) What do you mean by operator precedence and associativity? Explain with example.
- (05 Marks)
- [25 Marks]**

**Question 03:**

- a) What is Recursion?
- (05 Marks)
- b) Write a C program by using recursion function to compute factorial of any number
- (05 Marks)
- c) What is Looping? Explain its types with example. Create appropriate program for each.
- Note:** For the example part you must write about problem scenario that you are going to solve; then, algorithm, flow chart and finally C coding.
- (15 Marks)
- [25 Marks]**

**Question 04:**

- a) What is File? Write the process for opening and closing file with example.

(15 Marks)

- b) Explain various modes in opening a file in C.

(06 Marks)

- c) Explain 4 basic functions used for file handling in C programming language

(04 Marks)

**[25 Marks]**

**[Total 100 marks]**

**\*\* END \*\***