

035

SOUTH EASTERN UNIVERSITY OF SRI LANKA
FIRST EXAMINATION IN BACHELOR OF INFORMATION AND
COMMUNICATION TECHNOLOGY - 2020/2021
SEMESTER – I, MAY - 2023

SWT 11022 – PRACTICAL FOR FUNDAMENTALS OF PROGRAMMING

Answer all Questions

Time: 03 hours.

Instructions:

- On the Desktop, make a folder with your index number. (For example, ICTXXX)
- Within your index-numbered folder, create subfolders named Q1, Q2, and Q3.
- All answers should be documented, including code and screenshots of their outputs. Save the document in the same folder as your registration number.
- Make sure to frequently save your work.

Question 01:

- A. Write a C program that prompts the user to enter 10 integers and performs the following operations (using separate functions for each).
- i. Sum.
 - ii. Average.
 - iii. Identify even numbers & odd numbers.

(06 Marks)

- B. Create C programs that prompt you to print the pattern to get the output shown below.

i.

```
    1
  1 1
1 2 1
1 3 3 1
1 4 6 4 1
```

ii.

```
S
SR
SRI
SRIL
SRILA
SRILAN
SRILANK
SRILANKA
```

(06 Marks)

- C. Create a C program to generate the results sheets for a student's five(05) subject modules (shown in the output).
- Utilize the user prompt to obtain the marks and other details (name, Reg no, subjects, marks, etc).
 - Generate the grade of the student by finding the average and display the Final Grade on the results sheets shown below on the screen.

OUTPUT

SOUTH EASTERN UNIVERSITY OF SRI LANKA FIRST EXAMINATION IN BACHELOR OF INFORMATION AND COMMUNICATION TECHNOLOGY - 2020/2021 SEMESTER – I, MAY - 2023	
MARKS SHEET	
Registration No : XXX/XX/XX/XXX/XXX Name: XXXXX XXXXXXXXX XXXX	
Subject 1. Fundamentals of Programming 2. 3. 4. 5.	Marks 100
FINAL GRADE : XxXXX XXXXX	

Grades of the students calculate to find the final results above :

Marks	Result
Avg<40	Fail
Avg>40	Ordinary Pass
Avg>50	Credit Pass
Avg>60	Good Pass
Avg>70	Very Good Pass
100>Avg>85	Merit Pass

(20 Marks)

- D. Change/ modify the above C program in the Question 1 (C) part to save the output to the text file **Resultsheet.txt**.

(20 Marks)

[52 Marks]

Question 02:

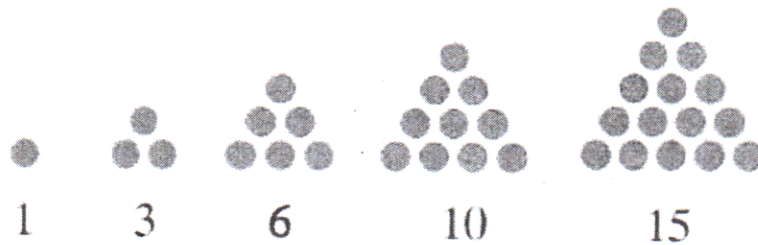
A. Write a C Program to use the user-defined function for the following table.

Function Name	Functionality
EvenNumber	To store 10 random integers in an array.
CheckNum	While reading distinguish odd and even numbers into two separate arrays.
findOdd	Print odd numbers
FindEven	Print even numbers
findSquare	Print Square Numbers

[Hint: Use Appropriate return type, parameters if any needed for the function.]

(15 Marks)

B. Write a Program to calculate triangular numbers using the recursion function.



(10 Marks)

C. A User wants to Create a system to enter the value himself. The value should Convert Fahrenheit to Celsius ($^{\circ}\text{F}$ to $^{\circ}\text{C}$). write a C program to develop the system to find Fahrenheit to Celsius.

[Hint: $^{\circ}\text{C} = (^{\circ}\text{F} - 32) * 5/9$]

(05 Marks)

[30 Marks]

Question 03:

A. Write a C program; Declare two integer variables, a and b, as well as two integer* pointer variables, x, and y. Set a to 02, b to 20, x to a's address, and y to b's address. Then print the information below.

- The address of a and the value of a.
- The value of *x.
- The address of b and the value of b.
- The value of *y.
- The address of x.
- The address of y.

[18 Marks]

[Total 100 Marks]