

24 OCT 2019

M.Sc. SEM – 03

Seat No. _____

Mathematics: Paper – 12 Code: 21602

Subject Title – Programming with – C

Time: 2 ½ Hours]

[Total Marks: 70

Q.1 (A) Discuss types of programming language. [14]

OR

Q.1 (A) (i) Differentiate compiler and interpreter. [7]

(ii) Draw a block diagram of computer and describe functions of its components. [7]

Q.1 (B) Attempt any four out of six. [4]

(1) Secondary memory is classified as ____.

(2) Write a full form of 'EEPROM'.

(3) What is CU?

(4) List out output devices.

(5) Write component of CPU.

(6) Write types of programming language.

Q.2 (A) Explain C character set, tokens, keywords, variables and constants. [14]

OR

Q.2 (A) (i) Explain scanf() statement with example. [7]

(ii) What is algorithm? Give one example. [7]

Q.2 (B) Attempt any four out of six. [4]

(1) What is integer arithmetic?

(2) If the relation is true then it returns ____.

(3) What is the meaning of \a in C?

(4) Assignment operator is used to ____.

(5) Explain any one data type.

(6) If A=1 and B=0 then logical value of the expression !(A && B) will be _____. (true/false)

Q.3 (A) Explain different types of if statement in detail. [14]

OR

Q.3 (A) (i) Explain different types of jumping statements. [7]

(ii) Explain for loop with example. [7]

Q.3 (B) Attempt any three out of five. [3]

(1) What is entry control loop and exit control loop?

(2) Write syntax of ternary operator.

(3) Given an example where break statement can be used.

(4) A function $\text{asin}(x)$ returns _____.

(5) Write down the categories of *C* functions.

Q.4 (A) Write a *C* program to find solution of system of linear [14]
equations with two unknowns.

OR

Q.4 (A) (i) Write a *C* program to input a year and determine whether it is a [7]
leap year or not.

(ii) Write a *C* program to enter percentage and determine the class [7]
obtained.

Q.4 (B) Attempt any three out of five. [3]

(1) How to declare a one dimensional array?

(2) What is the use of `%c` ?

(3) What are the types of arrays in *C* ?

(4) How many times the following *for* loop will be executed?

`n=5`

`for (n=0; n<5; n++)`

`scanf("%d", &a[n];`

(5) Which type of the array can be used in finding dot product of
two 3-dimensional vectors?
