

Total No. of printed pages = 4

63/2 (SEM-1) MCA 1-1

2021

(held in 2022)

MCA

(Theory Paper)

Paper Code : MCA-1-1

(Introduction to Computer and Programming)

Full Marks – 75

Time – Three hours

The figures in the margin indicate full marks for the questions.

1. Answer any *ten* of the following questions :  
2×10=20
- (a) What is a Preprocessor directive ?
  - (b) What is base address of an Array ?
  - (c) How does a structure differ from an Array ?
  - (d) What are Local and Global variables ?

[Turn over

- (e) How does a Union differ from structure ?
- (f) Explain Assembly and High Level Language.
- (g) What is the difference between while and do-while loop ?
- (h) What is the difference between i++ and ++i ?
- (i) What is formal and actual argument ?
- (j) What is the use of get c( ) and put c( ) ?
- (k) What is function prototype ? Why it is necessary ?
- (l) Why goto and continue is used ?

2. Answer any *five* of the following questions :

$$3 \times 5 = 15$$

- (a) What is variable ? What are the common properties to define a variable ?
- (b) How an array of character can be initialized ? Explain with example.
- (c) Define the anatomy of C function.
- (d) What is storage class of a variable ? Define all the categories of storage class.

- (e) Explain the importance of typedef and enumeration with example.
- (f) What is pointer ? How can it be initialized ? -- Write few advantages of pointer.
- (g) Write in-build function for the following task :
  - (i) Find the length of string
  - (ii) Copies one string to another
  - (iii) Compare two string.

3. Write the following C program (any *six*) :

$$5 \times 6 = 30$$

- (a) Write a program to count the number of digits of an integer number.
- (b) Write a program to find the factorial of a number using recursive function.
- (c) Write a program on bubble sort technique using function.
- (d) Write a program to take an array and find the sum of all the elements by using pointer.

- (e) Write a program to search a number and find the number of occurrence of searched item using function.
- (f) Write a program of binary search technique using function.
- (g) Write a program to add two matrices using pointer.
- (h) Write a program to create a marksheet of n number of students consider the following attributes like marks of each subject, percentage, pass or fail and back paper information.

4. Write short notes on any *two* of the following :

$$5 \times 2 = 10$$

- (a) Operators in C language.
- (b) Call by value and call by reference.
- (c) Recursive function with example.