FYUGP(Sem-I) —
CA (MJ – 1)

2023
(Session : 2023-27)

Time : 3 hours

Full Marks : 60

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer from both the Groups as directed.

Group – A

1. Choose the correct answer of the following :

$1×5 = 5$

(a) Choose the correct input statement to input data into double type variable **num** :

(i)   scanf ("%f", num);

(ii) scanf ("%lf", num);

(iii) scanf ("%f", &num);

(iv) scanf ("%lf", &num);

CM – 29/2   (Turn over)

(b) _____ is called "address of" operator.

(i) *   (ii) &

(iii) : :   (iv) ? :

(c) _____ function is used for dynamic memory allocation.

(i) alloc()   (ii) malloc()

(iii) free()   (iv) None of these

(d) How many times will the following loop executes ?

```
# include < stdio. h>
int main()
{
        int a = 5;
        while(--a)
        {
        printf ("%d", a);
        }
        return 0;
}
```

(i) 0   (ii) 4

(iii) 5   (iv) Infinite

(e) _____ string function is used to compare two strings.

   (i) strcmp()   (ii) strcmpi()

   (iii) Both (i) and (ii) (iv) CompateTo()

2. Explain the difference between if-else and switch-case statement with syntax and suitable example. 5

3. What are the advantages of using functions in a C program ? Explain the difference between call by value and call by reference parameter passing. 5

Group – B

Answer any **three** questions of the following :

15×3 = 45

4. Explain various types of loop in C with syntax and suitable example. Write a program to find reverse of a number and check whether the number is palindrome or not.

5. What is file in C ? Why we need to store data in files ? Explain any five file handling function with syntax and suitable example. Write a program to read the contents of a text file and display the data on screen.

6. What is string in C programming language ? Explain any five string functions in C with example. Write a program to count total number of vowels and consonants present in a string.

7. What is array ? Explain two dimensional array with suitable example. Write a program to find transpose of a matrix of R x C order.

8. What is structure ? How can we declare and access elements of a structure ? Write a program to store student details such as Roll, Name and Total Marks of N students. Display details of all the students with grade as per given condition.

Total Marks	Grade
400 to 500	A
300 to 399	B
200 to 299	C
< 200	D

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