

B.TECH. Degree Examination, January 2021

Semester - I

GE16151– COMPUTER PROGRAMMING

(Regulation 2016)

Time: Three hours

Maximum : 80 Marks

Answer **ALL** questions

PART A - (8 X 2 = 16 marks)

1. Convert: $(11101)_2 = (\underline{\hspace{2cm}})_ {10}$.

- a) 25
- b) 15
- c) 26
- d) 29

2. What will this program print?

```
main()
{
    int i = 5;
    {
        int i = 7, j = 9;
        printf("%d %d", i, j);
    }
    printf("%d %d", i, j);
}
```

- a) 7979
- b) 7959
- c) 5959
- d) None of the these

3. Identify the incorrect declaration of arrays from the following

- a) int a[50];
- b) float values[10][20];
- c) double a[50];
- d) int score[10, 15];

4. Which of the following function is appropriate for reading in a multi word string?

- a) printf();
- b) scanf();
- c) gets();
- d) puts();

5. Distinguish between while.... and do while statement.
6. Justify what will happen if in a C program you assign a value to an array element whose subscript exceeds the size of array?
7. Differentiate between local and global variables.
8. Identify the advantages of user defined functions over pre-defined functions.

PART B - (4 X16 = 64 marks)

9. (a) (i) Develop an algorithm to find the greatest of three numbers. (8)
 (ii) Draw a flowchart to compute the factorial of a number n. (8)
- (OR)
- (b) Draw a block diagram of a computer and explain the different component of a computer system. (16)
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10. (a) Write about the need and types of looping statements in C. Discuss how different looping constructs can be applied to generate payroll of N employees. (16)
- (OR)
- (b) Discuss the structure of a C program with an example. Write a C program to read and print the gender and name of a person using formatted I/O functions. (16)
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11. (a) Given are two one-dimensional arrays A and B which are sorted in ascending order. Write a program to merge them into a single sorted array that contains every item from arrays A and B in ascending order. (16)
- (OR)
- (b) Discuss about the functions (i) strlen(), (ii) strcpy(), (iii) strcat(), (iv) strcmp() with example. Write a C program that applies these functions over the strings “Computer” and “programming”. (16)
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12. (a) Differentiate pass by value and pass by address in C with an example program. (16)
- (OR)
- (b) Write a program to sort a list of strings in alphabetical order using array of pointers. (16)