

**I B. Tech I Semester Supplementary Examinations, July/August - 2021****COMPUTER PROGRAMMING**

(Com. to ECE, Aero E, Auto E, Bio-Tech, Chem E, CE, CSE, IT, EIE, EEE, ME, Metal E, Min E, PChem E, PE, ECom E)

Time: 3 hours

Max. Marks: 70

- Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)  
 2. Answer the question in **Part-A** is Compulsory  
 3. Answer any **FOUR** Questions from **Part-B**

**PART -A**

1. a) What is the necessity of using ROM in a computer? [2M]
- b) What is the associative property of an operator? Why is it important? [2M]
- c) Can we use 'continue' statement in switch case? Give justification to your answer. [2M]
- d) What is the lifetime of a 'static' variable in a C function? [2M]
- e) Explain the difference between char \*S and char S[]. [2M]
- f) Why dangling pointers are dangerous? [2M]
- g) What is the use of bit fields in C? [2M]

**PART -B**

2. a) What is Software? Explain about various types of software with necessary examples. [7M]
- b) Explain about various phases in Software Development Process. [7M]
3. a) What are Relational Operators? What is the result of a relational operator? Explain with a sample 'C' program. [7M]
- b) What do you mean by Formatted Output? Explain in detail the prototype of 'printf' function in C programming, including its argument list and return type. [7M]
4. a) Write a C program to input the angles of a triangle and check whether the triangle is equilateral, scalene or isosceles triangle. [7M]
- b) Write a C program to generate Pascal's triangle.  
Hint: The pattern for Pascal's triangle of 4<sup>th</sup> row can be observed as given below.  

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1
1 1
1 2 1
1 3 3 1

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[7M]
5. a) What are various types of parameter passing techniques in 'C' programming? Explain with an example. [7M]
- b) What do you mean by storage class? How many storage classes are there in C? Explain the importance of each one. [7M]
6. a) What are multidimensional arrays in C? Where are multidimensional arrays used? How does memory allocation takes place for a multidimensional array in C. [7M]
- b) Write a C program to sort a set of strings in alphabetical order using pointers. [7M]
7. a) What is meant by Dynamic memory allocation in C language? Discuss the advantages and disadvantages of dynamic memory allocation. [7M]
- b) Write a C program to display the details of employees in an organization using structures.  
*Employee Details* include Aadhar number, Name, Gender, Contact number, Address [7M]