Exam.		**Regular**	
Level	BE	Full Marks	80
Programme	All (Except B. Arch)	Pass Marks	32
Year / Part	I / I	Time	3 hrs.

Subject: - Computer Programming *(CT401)*

✓ Candidates are required to give their answers in their own words as far as practicable.
✓ Attempt **All** questions.
✓ The figures in the margin indicate **Full Marks**.
✓ Assume suitable data if necessary.

1. a) What is a programming language? What is the difference between source code and object code. [2+2]

   b) What is debugging and testing? What are the step that need to be followed for developing the application software. [2+2]

2. a) What is the difference between variable declaration and variable definition? Explain with example. [4]

   b) What do you mean by macro expansion and file inclusion in C? Explain with example. [4]

3. What are functions used for formatted and unformatted output? Write down its syntax. Write down the output of printf() function for the following sections of statements. [4+4]

   float a = 5.7891;

   int b = 6789;
   printf("a=%4f and b=%-7d from first line", a,b);
   printf("a=%-7.2f and b=%07d from second line", a,b);
   printf("a=%.2f and b=%2d from third line", a,b);

4. a) Explain about while loop with its syntax and flowchat. [4]

   b) Write a program to convert a decimal number into binary number. [6]

5. a) Can a function return an array to the calling function? Explain with example. [4]

   b) Write a program to read a mxn matrix of integers and to find the largest elements of each row. Store the largest elements of the row in a one-dimensional array of m integers before displaying them. [6]

6. a) How does a structure differ from an array? What are the different ways to access structure member? [4]

   b) Create a structure named student that has name, roll and marks as members. Assume appropriate types and size of members. Use this structure to read and display records of 10 students. Crete two functions: One is to read information of students and other to display the information. [6]

7. a) Define following term: [5]

      i) int*p;
      ii) int p(char*a)
      iii) int(*p(char*a))
      iv) int *p(void)
      v) int*(*p[10])char a)

   b) Write the advantages of using pointer in C- programming. [3]

   8. Write a program to copy to copy content of one file source.txt to another destination.txt. [8]

9. a) Explain the FORTRAN structure. What are different types on FORTAN? [2+3]