ALL

Exam.	New Back (2066 & Later Batch)		
Level	BE	Full Marks	80
Programme	All(Except B. arch.)	Pass Marks	32
Year / Part	I / I	Time	32 hrs.

Subject: - Computer Programming *(CT 401)*

✓ 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. Differentiate between high level and low level. Explain the steps of solving a problem using computer. [4+4]

2. Consider a statement

   `scanf("%s",str);`

   Where str is a string variable

   In above statement, why '&' symbol is not used? Can we input string with space in this statement? If not, why? [4]

3. Write a program in C to find all possible roots of a quadratic equation $ax^2+bx+c=0$. [8]

4. Write down significance of main( ) function in C. Differentiate between pass by value and pass by reference arguments. Describe both with meaningful example. [2+6]

5. Explain how array can be passed to functions. Write a program that passes an array to a function and print the largest and smallest element. [2+6]

6. How are structures different from arrays? Create a structure in C to store the name of a batsman, runs scored and no of times the batsman in dismissed. In the program, read the data of five players and display the batting average of the player whose name is entered by the user. Batting average is given by total_runs/total_dismissals. [2+6]

7. Write down advantages of pointer. What type of arithmetic operations can be implemented in pointer? Also describe the relationship between array and pointer with appropriate syntax and examples. [2+3+3]

8. Write a program in C, to read the following information for 96 students.

   Student Name, Student roll number, Marks obtained(in 100)

   Record all data in "ioe.txt" file, and program should print roll number and name of student who have obtained greater than or equal to 40 marks. [8]

9. Rewrite the following source code correcting any error present in it. Also indicate the error corrected in comment. Then write the output of the program. [4+4]

```
//program to convert list of temperatures
//in Centigrade to Fahrenheit
#include stdio.h;
int main()
{
      int i, n=3;
      float celc[n], faren[n];
      for(i=0; i<n; i++)
      {
            print("Celc[%d]=")
            scanf("%d", celc[i]);
      }
      convert(celc, faren, n);
      for(i=0; i<n; i++)    print(faren[i]);
      break;
};
void convert(float cel[], float far[], int n)
{
      for(i=0; i<n; i++)    cel2far(far[i], cel[i]);
};
cel2far(float f, float c)
{    f = 9/5*c+32;   };
```

10. How are do-loops used in FORTRAN? Explain with example. Compare it with implied do-loop. Write a FORTRAN program to read ten integer numbers, store them in array, arrange them in ascending order and display the sorted list. [1+1+6]

11. What is the syntax of two dimensional arrays in FORTRAN? Explain with example. [4]

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