B.Tech 1st Semester End Term Examination- 2022

Name of Subject: Introduction to Programming

Paper Code: UCS11B08

Full Marks: 50 **Time: 2 Hours**

The figures in the margin indicate full marks for the questions

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

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Answer all the questions(Calculators are not allowed)

1. (a)What do you mean by an assembler? How does it differ from Compiler?
   (b) What are the types of tokens in C programming?
   (c) Briefly explain different storage classes in C with example.
   (d) In which header file the functions associated with strings are stored. Name five such functions.
   (e) Differentiate between analog and digital computer. (2X5=10)

2. (a) Convert the following:
   (i) $(CDE.8A)_{16}=(?)_8$
   (ii) $(8950.67)_{10}=(?)_{16}$
   (iii) $(725.36)_8=(?)_2$
   (b)(i) Perform $(54)_{10}$-$(85)_{10}=(?)_{10}$ using 2's complement.
   (ii) $(10110011)_2+(10101011)_2=(?)_2$ (2+2+2)+(2+2)=10)

3. (a) Discuss the advantages of the Fourth Generation of computer with respect to the earlier generations.
   (b) What are the types of ROM available in the computer system? Discuss each of them.
   (c) Explain the function of strcpy( ) and strcmp( ).
   (d) Write a C program to input an integer array having 10 elements. Find the total number of prime numbers in the array and print the numbers. (3+4+4+4=15)

4. (a) Simplify the boolean expression given below and draw the logic diagram for the minimized expression using the universal gates:

$$f(A,B,C,D) = \bar{A}.\bar{B}.D + \bar{A}.B.D + B.C.D + A.C.D$$

   (b) Write an algorithm to find the largest number among n numbers and draw the flow chart for the same.
   (c) Define a process. How many types of process scheduling exist? Explain each of them.
   (d) Using user defined function write a C program to swap the value of two variables.
   (3+4+4+4=15)

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