ES202   Enrol. No. ....
[ET]

END SEMESTER EXAMINATION : NOV-DEC 2022

INTRODUCTION TO COMPUTERS AND PROGRAMMING IN C

Time : 3 Hrs.   *Maximum Marks : 60*

Note: *Attempt questions from all sections as directed.   Use of non-programmable calculator is allowed*

SECTION – A   (24 Marks)
Attempt any four questions out of five.
Each question carries 06 marks.

1. Evaluate:

    (a) $(672)_8 = (?)_{16}$

    (b) 11100101-00101110

    (c) $(11100.1001)_2 = (?)_{10}$

(b) If cost price and selling price of an item are input through the keyboard, write a program to determine whether the seller has made profit or incurred loss. Also determine how much profit he made or loss he incurred.   (4)

(c) Define expression? Evaluate the following expressions

$100 \% 20 < = 20 - 5 + 100 \% 10 - 20 = = 5 > = 1 != 20$

$a + = b * = C - = 5$ where a=3 b=5 and c=8
(4)

2. Explain formatted input and output statement with examples.

3. Write a C program that takes from user an arithmetic operator (+, -, *, or /) and two operands . Perform corresponding arithmetic operation on the operands using switch statement

4. Define function? Explain different classification of user defined functions based on parameter passing and return type with examples

5. Write a program to read data from keyboard, write it to a file called INPUT, and read the same data from the INPUT file and display it on the screen

SECTION – B　　　**(20 Marks)**

Attempt any **two** *questions out of* **three**.

Each question carries **10** *marks*.

6. (a) Define string. How string is declared and initialized? Explain string input/output functions with an example　　(5)

(b) Explain basic data types available in C? Write the significance of each data type　　(5)

7. (a) What are the main components of von Neumann architecture? Explain it with the help of block diagram　　(5)

(b) Explain counter controlled repetition with while loop. Give an example.　　(5)

8. (a) Write a program to maintain a record of 'n' employee detail using an array of structures with three fields(id, name , salary) and print the details of employees whose salary is above 5000　　(7)

(b) What is an array? How a single dimension and two dimension arrays are declared and initialized?　　(3)

SECTION – C　　　**(16 Marks)**

(Compulsory)

9. (a) Write a program in C to reverse the contents of a file using random access file mode.　　(8)

P.T.O.