

U.G. 3rd Semester Examination - 2021**COMPUTER SCIENCE****[HONOURS]****Generic Elective Course (GE)****Course Code : COM.SC-H-GE-L-101****(Computer Fundamentals & Programming using C)**

Full Marks : 40

Time : $2\frac{1}{2}$ Hours*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.***GROUP-A**1. Answer any **five** questions from the following: $2 \times 5 = 10$

- a) What is an escape sequence?
- b) What is a loop?
- c) What is the difference between function declaration and function definition in C?
- d) What do you mean by local variable and global variable?
- e) Define pointer variable with the help of examples.
- f) What is array of structure? Give an example.

[Turn over]

- g) What are the purposes of break and continue statements?

GROUP-B2. Answer any **two** questions: $5 \times 2 = 10$

- a) What is associativity? Explain the operator precedence. $2+3$
- b) Explain basic data types and their sizes with suitable examples. 5
- c) What is meant by call by value? Explain how it is different from call by reference. $2+3$
- d) Differentiate between else-if and switch. 5

GROUP-C3. Answer any **two** questions: $10 \times 2 = 20$

- a) What is an array? What are the different ways of initializing arrays? What are the disadvantages of an array?
 - b) Write two string handling functions available in C. $(1+2+2)+5$
4. a) What is recursive function?
 - b) Write a C program to swap the values of two variables using a function.

c) Write a C program to find the sum of the digits of any given positive integer. $2+3+5$

5. a) Write different file opening modes available in C.

b) Write a C program to create a text file and read the text from the created file and count the number of vowels and consonants present in the file.

c) What do you mean by formatted input?
 $2+5+3$

6. Write short notes on any **two** of the following:
 $5 \times 2 = 10$

a) Generation of computers

b) Single error-detecting and correcting codes

c) Binary Coded Decimal (BCD)
