

2019

B.Sc.

2nd Semester Examination

**ELECTRONICS (Honours)**

Paper - C4T

(C Programming and Data Structures)

Full Marks : 40

Time : 2 Hours

*The figures in the margin indicate full marks.  
Candidates are required to give their answers  
in their own words as far as practicable.*

**Group - A**

1. Answer any *five* of the following questions : 2×5
  - (i) Explain C preprocessor directives.
  - (ii) Define a string and write any two string functions.
  - (iii) What are binary operators?
  - (iv) Write difference between structures and union.
  - (v) Write four types of storage classes.

[ Turn Over ]

- (vi) What are the differences between break and continue statements.
- (vii) What is circular queue?
- (viii) What is binary search?

**Group - B**

2. Answer any *four* questions : 4×5

- (i) What is the purpose of a 'printf( )' and 'scanf( )' statements? Write a c program to find area of a triangle. 1+1+3
- (ii) What is an array? Explain declaration, initialization and applications of multi-dimensional array with a example. 1+1+1+1+1
- (iii) What are different dynamic memory allocation functions? Explain its syntax with an example. 2+2+1
- (iv) What is a pointer? Explain how the pointer variable declared and initialized. 2+1½+½
- (v) What are primitive and non-primitive data types? 2½+2½
- (vi) Briefly write about bitwise operations, macros and command term parameters. 2+1+2

**Group - C**

3. Answer any *one* question : 1×10=10

(i) (a) Give difference between the structures and arrays. 5

(b) Write a program for finding the largest number in an array. 5

(ii) (a) Distinguish between call by value and call by reference with examples. 2½+2½

(b) Write a program to display ten Pascal's triangle. 5

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