2018

2nd Semester

ELECTRONICS

PAPER—C4T

(Honours)

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.

Illustrate the answers wherever necessary.

C Programming and Data Structures

1. Answer any *five* questions.   5×2

   (a) What do you mean by assignment statement ? Explain with an example.

(b) What is header file in 'C'?

(c) What is conditional operators?

(d) How does 'scanf' function works?

(e) What is a databox management system? Give an example.

(f) Give a basic syntax for if ... else conditions.

(g) How does stack work?

(h) What is the difference between i++ and ++i?

2. Answer any *four* questions.   4×5

(a) What do you mean by structured programming? Explain its merits and demerits.   2+3

(b) What is linked list? What are advantages of using linked list? How is it implemented?   1+2+2

(c) Write a program to find the biggest value among 10 numbers.   5

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(d) What is data types ? Mention the different data types in 'C'.   1+4

(e) What is the difference between while and Do-while loop ? Give examples.   3+2

(f) What is a Preprocessor directive ? List the difference between an array and structure. $2\frac{1}{2}+2\frac{1}{2}$

3. Answer any *one* question.   1×10

(a) (i) What is variable and constant ? Mention the rules for naming a variable in 'C'.   2+3

(ii) Write a program in 'C' to arrange a list of numbers in ascending order.   5

(b) (i) Convert the following arithmetic expression into postfix and solve it using stack

$$(5*3)/(6+3)*(4-1).$$

(Turn Over)

(ii) How does bubble sort works ? Represent step by step with an example.   4

(iii) Write a C-program to find whether a number is prime or not.   4+3+3

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