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52 (Sem-1) 1-4

2018

**COMPUTER FUNDAMENTALS AND
PROGRAMMING**

Paper : 1-4

Full Marks : 60

Time : Three hours

***The figures in the margin indicate
full marks for the questions.***

1.

1×5=5

- (a) C language has been developed by _____.
- (b) In C, an array of characters is known as _____.
- (c) _____ function is used to compare string 2 with string 1.
- (d) The keyword struct in C defines a _____.
- (e) Variables that hold memory are called as _____.

Contd.

2. Define Computer. What are the major components of computer? $2+3=5$

3. Answer **any four**: $2 \times 4 = 8$

(a) Differentiate between primary memory and secondary memory.

(b) Draw a flowchart to find the factorial of a given integer.

(c) What is the purpose of switch statement?

(d) Explain with example a for loop used in C.

(e) What is a static variable?

4. Answer **any four**: $3 \times 4 = 12$

(a) What is the difference between pass by value and pass by reference?

(b) Differentiate between a Structure and a Union.

(c) Write a C program to find the sum of natural numbers from 1 to n .

(d) Explain the four string handling functions in C.

(e) Define an array. How do we initialize a one-dimensional and a two-dimensional array?

5. Answer **any four**: $5 \times 4 = 20$

(a) What is a pointer? What are the major advantages of a pointer?

(b) What is a preprocessor? Explain the various preprocessor directives.

(c) Explain the various types of functions supported by C. Give example for each C function.

(d) What are the loop control structures? Discuss the three loop control structures briefly.

(e) What is associativity, explain the operator precedence?

(f) Write a C program to find the sum and average of given three numbers. Also draw the flowchart.

6. Answer **any two**: $5 \times 2 = 10$

(a) Write a program to search for an element using binary search.

(b) Write a program to generate transpose of a matrix.

(c) Write a program to reverse a number in C.