Roll No. | | | | | | | | | | | | |

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (2011 to 2017) (Sem.–1,2)

FUNDAMENTALS OF COMPUTER PROGRAMMING AND IT

Subject Code : BTCS-101

Paper ID : [A1108]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION - B &C. have FOUR questions each.
3. Attempt any FIVE questions from SECTION B & C carrying EIGHT marks each.
4. Select atleast TWO questions from SECTION - B &C.

SECTION-A

1) Explain in brief the following :

a) Why C++ is called object oriented programming?

b) Difference between RAM and ROM.

c) Why are pseudocodes important?

d) What is data encapsulation?

e) What is operator overloading?

f) Can arrays be passed as arguments to a function? If Yes, how? If No, why?

g) Write about 'strlen' and 'strcat' functions. On which data type do these functions work on?

h) Differentiate between computer software and hardware.

i) What are tokens?

j) Properties of an algorithm.

SECTION-B

2) Answer the following questions : (2×4 = 8)

a) Explain a computer system with the help of a block diagram.

b) What is an Operating System (OS)? What is the importance of OS in computer system?

3) How is an algorithm different from a flowchart? Can pseudocode be used to represent an algorithm? Support your opinion with illustrations. (8)

4) Attempt the following : (2×4 = 8)

a) Write a C++ program to swap two numbers.

b) Write a program to check whether a number is palindrome or not?

5) Attempt the following : (2×4 = 8)

a) Write a program to check that a number is a prime number or not using functions.

b) Write a program to reverse a sentence using recursion.

SECTION-C

6) a) What are classes? (4×2 =8)

b) What is an object?

c) What are constructors?

d) What are destructors?

7) What are control statements? Explain 'Continue', 'Goto' and 'Break' statements. (8)

8) What is inheritance? Discuss in detail with examples. (8)

9) How are pointers important in C++? How are they declared? Explain with the help of an appropriate program. (8)