14616

B. Tech 2nd Semester Examination

Introduction to Computer & Programming in C (O.S.)

CS-1001

Time : 3 Hours   **Max. Marks : 100**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Candidates are required to attempt five question in all selecting one question from each of the section A, B, C & D of the question paper and all subparts of the questions in Section-E. Use of non-programmable calculators is allowed.

SECTION - A

1. (a) Explain the role of hard Disk and its functioning with diagram.   (8)

   (b) Explain different types of Hard Disks.   (6)

   (c) What are I/O devices? List some of the important Devices.
                                                                             (6)

2. (a) What is BIOS? Whether BIOS is hardware or software. Justify your answer.   (8)

   (b) What is the function of control Unit, ALU and Register?
                                                                             (6)

   (c) Explain the Functions of Operating System.   (6)

SECTION - B

3. Give syntax of following control structure: (2×10=20)

   (a) If then else Statement. Explain with program in C to find the largest of the three numbers.

   (b) Do While statement. Explain with program in C to print a table Fahrenheit, Celsius for the temperature given from 1F to 100 F in a step of 2.

4. What do you understand by Debugging, Testing? Explain its role stepwise in order to achieve quality product. (20)

SECTION - C

5. (a) Define Arrays in C. Explain different types of arrays with example. (10)

   (b) How are arrays processed in C? Can entire arrays be processed with single instruction without repetition. (10)

6. What are the Data Type? List the various categories from which the character Set of C is formed. (20)

SECTION - D

7. Write a program in C to find the roots of Quadratic Equation. (20)

8. (a) Write a program in C to calculate the compound Interest for a given principal amount. (15)

   (b) Explain, How are multi-dimension, arrays defined? (5)

SECTION - E

9. **(Compulsory Question)**

   (i) Explain Difference between Information Technology and Computer Science.

(ii) Explain the Function of Interpreter.

(iii) Explain the function of Linker and Loader.

(iv) Which of the following are invalid constant and why:

0.243, −13.45.

(v) Write different types of Operating systems.

(vi) Why is C called structured programming language?

(vii) Distinguish between local & global variables.

(viii) Draw a flow chart for differential equation.

(ix) Explain functioning of Motherboard of Computer System with diagram.

(x) What is the full form of SMPS and its function in a computer system? (2×10=20)