B.Tech.

(SEM. I) THEORY EXAMINATION, 2015-16

COMPUTER SYSTEM & PROGRAMMING IN C

[Time: 3 hours]   [Total Marks:100]

Note : Attempt all Questions from all Sections as per directions

Section-A

1.   Attempt **all** parts of this section. Answer in brief.

                                        (2×10=20)

   (a)   List five internal and external commands used in DOS operating system.

   (b)   Explain the basic structure of C program.

   (c)   How binary file differ from text file?

   (d)   Give difference between android and window OS.

   (e)   Differentiate between structure and union.

(f) What is void pointer? How is it different from other pointers?

(g) Justify that operating system is a resource manager.

(h) Explain the dot (.) operator in C language with proper example.

(i) What do you mean by operator precedence?

(j) Write difference between implicit and explicit type casting.

Section-B

Attempt **any five** questions from this section.   (10×5=50)

2. What are the different types of functions? Write a program in C to sort list of names of students in an ascending order.

3. Write a short note on top down program development approach.

4. Write a program in C to reverse a string through pointer.

5. Write difference between call by value and call by reference with suitable example.

6. What are the characteristics of an algorithm? Write an algorithm to find the sum of all the numbers divisible by 3 between 11 and 50.

7. Illustrate and compare the static and extern storage classes with a relevant example in C.

8. State the features of pointers. Write a C program to sort a given number using pointers.

9. Differentiate between the following :

   (i) High level language and low level language.

   (ii) Linker and loader.

   (iii) Logical error and run time error.

   (iv) Algorithm and flowchart.

Section-C

Answer **any two** questions from this section: $(15 \times 2 = 30)$

10. What are the various types of files that can be created in C langauge? Also give different modes in which these files can be used with proper syntax. Write a program in C langaue to append some more text at the end of an existed text file.

11. (a) Write a C program to check whether a given square matrix is symmetric or not.

(b) Define data types in C. Discuss primitive data types in terms of memory size, format specifier and range.

(c) List out various file operations in 'C'. Write a C program to count the number of characters in a file.

12. (a) Write the difference between type conversion and type casting. What are the escape sequences characters?

(b) What are the different types of operators in C langauge and also write down the difference between the associatively and precedence of operators.

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