

Roll Number:

B.E /B.TECH DEGREE EXAMINATION. NOV/DEC 2013
Common to all Branches
First Semester
GE9112 - FUNDAMENTALS OF COMPUTING
(Regulation 2008)

Time: Three Hours

Answer ALL Questions

Maximum: 100 Marks

PART A (10 x 2 =20 Marks)

1. State von Neumann computer model
2. Convert $E6F.F_{16}$ to decimal and octal number system
3. What is a URL?
4. Differentiate system software and application software.
5. A C program contains the following declarations and initial assignments:

```
int i = 7, j =4;  
float x = 0.005, y = -0.01;  
char c = 'c', d = 'd';
```

Determine the value for the following expressions. Use the values initially assigned to the variables the expression.

$(x > y) \ \&\& \ (i > 0) \ \&\& \ (j < 5)$

6. State the application of break and continue statements in C programming.
7. Define pre-processor directive.
8. Write the output generated by the following C program

```
#include <stdio.h>  
main(){  
    int a;  
    static char c[] = " Programming with C can be great fun!";  
    for(a=0;c[a]!='\0';++a)  
        if((a%2)==0)  
            printf("%c %c",c[a],c[a]);
```

9. What is a pointer constant?
10. Write any two applications of linked list

PART B (5 x 16 = 80 Marks)

- 11.a. Explain in detail the working of different components of fourth generation computer system.
- 12.a. Describe in detail the various system and application computer software
(OR)
- 12.b. I. Write short notes on different steps in software development (4)
II. Describe any four internet services in detail. (12)
- 13.a. I. Describe the different data types used in C programming language (8)
II. Write a program for printing the sum of even terms contained within given two limits. (8)
(OR)
- 13.b. I. Explain with suitable examples different repetitive control structures in C (8)
II. A XYZ construction company planning to give a 5% year-end bonus to each of its employee earnings Rs.5,000 or more per year, and a fixed bonus of Rs.250 to all other employees. Write a C program for printing the bonus of an employee. (8)
- 14.a. I. Briefly explain call by value and call by reference with suitable examples (8)
II. Write a function namely, *CheckPalindrome* to check whether the given target integer is palindrome number or not. A palindrome number is a number when reversed is same as the original number. Also, write a program to test the function. (8)
(OR)
- 14.b. Write a C program to accept a list of data items and find the second largest and second smallest elements in it. And also compute the average of both. And search for the average value whether it is present in the array or not. Display appropriate message on successful search
- 15.a. I. Describe the different string functions and its application (8)
II. Explain with illustrative example advantages and limitations of dynamic memory allocation. (8)
(OR)
- 15.b. I. Define pointers and with suitable examples illustrate its applications. (8)
II. With illustrative examples explain the difference between structures and unions (8)

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