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**B.E. / B.Tech (Full Time) Arrears Examinations,
APRIL / MAY 2013**

COMMON TO ALL BRANCHES
First Semester

GE 8161 - COMPUTING TECHNIQUES
(Regulations 2012)

Time: 3 Hours Answer ALL Questions Max. Marks 100

PART- A (10 × 2 = 20 Marks)

1. Convert a decimal -27(minus twenty seven) into binary number, using 2's complement.
2. What is stored program concept ?
3. Write the output of the following C program :

```
main () {  
    int x;  
    float y;  
    x = 17 + 23 % 7 / 6;  
    y = (3 * x) / (12 % 8);  
    printf ("%d %f", x, y);  
}
```
4. Write an "if" statement to check whether an integer variable m is in the range of 80 to 90,
5. Consider the declaration, $\text{int } a[] = \{ 5, 7, 4, 8, 10, 3, 9 \}$. What is the size of array a and what is the value referred by $a[4]$?
6. Write the situations, when single quote(') and double quotes("") are used in a C program ?
7. Give an example for `strcat()` function.
8. What is the purpose of a structure variable ?
9. How "#define" is used in a C program ?
10. What is the importance of storage class ?

PART – B (5 × 16 = 80 Marks)

11. i) What are the different types of computers ? How are they classified? Explain. (8)

ii) Draw a flow chart to find the greatest of 3 numbers (8)

12. a) List all the unary and binary operators in C and explain each with example.

(OR)

b) i) Explain the "if" condition statement with an example. Describe "nested if" statement in C. (8)

Write a loop statement for the following : (4+4 = 8)

ii) to display the factors of a given integer.
E.g, factors of 24 are, 2, 3, 4, 6, 8, 12

iii) to display the multiplication table for a given number n upto 12.

13. a) i) Write a C program to check whether a given word is palindrome or not. (8)

ii) Write the syntax of "switch-case" statement. Describe its multiconditional checking and limitations with example. (8)

(OR)

b) Write a C program to compute the

i) addition of two two-dimensional matrices (6)
ii) multiplication of two two-dimensional matrices (10)

14. a) i) Describe, how to declare, define and calling a function. Illustrate by writing a function to find the factorial of an integer value. (10)



ii) What is a pointer variable ? Describe its usage with example. (6)

(OR)

b) i) Explain pass by value and pass by reference in functions with example. (8)

ii) Write a C program to count number of vowels, words and special characters (\$, @, #), separately from a given sentence. (8)

15. a) Define a structure stud with rollno, name and percentage of mark. Declare the necessary structure variable and show its usage with an example to store a student's information. (16)

(OR)

b) i) What is a macro ? Compare macro and function with illustration. (8)

ii) List the pre-processor directives. Explain any two with example. (8)
