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B.E/B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, APRIL/MAY 2012
Common to All Branches
FIRST SEMESTER
GE172 – FUNDAMENTALS OF COMPUTING
(REGULATIONS 2004)

2

Time: Three Hours

Max. Marks: 100

Answer All Questions

PART – A (10 X 2 = 20 Marks)

1. Explain the different ways in which computers can be categorized.
2. List the characteristics of a computer.
3. Differentiate between System software and Application software.
4. Perform the following Binary Arithmetic Operations
(i) $1010 * 1011$ (ii) $10010 * 10011$
5. Compare ASCII and EBCDIC.
6. How to insert a picture in a MS Word document?
7. Differentiate compiler and an interpreter
8. If $p = 2, r = 9, q = 3, w = 4, x = 2, y = 4$, Evaluate the expression $z = p * r \% q + w / x - y$
9. What is the output of the program?

```
#include<stdio.h>
main ()
{
    float a[10]; int i;
    printf("%d", size of(a));
    for(i=5; ++i; i-=3)
    printf("%d",i);
}
```
10. What is the difference between array and structure?

PART – B (5 X 16 = 80 Marks)

- 11 (i) Explain the working of a computer highlighting the functions of each component. **(10)**
(ii) Describe the different generations of computers **(6)**
- 12a (i) Explain how subtraction and division operations are performed within a computer by additive approach. **(8)**
(ii) Discuss the different types of Application software in detail. **(8)**

(OR)

- 12b Describe the steps involved in software development. **(16)**

- 13a** Draw the flowchart for the following **(8+8)**
- (i) To check whether the number is prime or not
 - (ii) To check whether the number is an Armstrong number or not.

(OR)

- 13b** (i) Write the steps for Mail merge and Sorting the values in a table using MS Word **(10)**
- (ii) Write a formula in Spreadsheet to find the average of values stored in b10 to b50 **(6)**

- 14a** (i) What are the various forms of a decision making statement **(6)**
- (ii) Write a 'C' program to find the roots of a quadratic equation using the decision making statement **(10)**

(OR)

- 14b** (i) Explain the operator precedence and associativity **(6)**
- (ii) Write a 'C' program to carry out the arithmetic operations addition, subtraction, multiplication, and division between two variables using switch construct to choose the operations. **(10)**

- 15a** (i) Write a 'C' program to compute the product of two given matrices, after checking whether the operation is possible. **(8)**
- (ii) Write a 'C' program to reverse each word of a given string **(8)**

(OR)

- 15b** (i) What is the importance of pre processor directives? **(4)**
- (ii) What is meant by "pass by value" and "pass by reference" in functions? **(4)**
- (iii) Write a 'C' program, using structures, to find the biggest of three numbers. **(8)**