

Roll No.

--	--	--	--	--	--	--	--	--	--

B.E / B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, APRIL / MAY 2014

COMMON TO ALL BRANCHES

Semester : 1

GE 172 & Fundamentals of Computing
(Regulation 2004)

Time: 3 Hours

Answer ALL Questions

Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. What is a graphics package?
2. Define pseudo code.
3. State the Von-Neuman architecture for digital computers.
4. State the software development advancements made during fifth generation computers.
5. Differentiate ASCII and extended ASCII.
6. What are the different symbols used in the hexadecimal number system?
7. What is the static variable? When should it be used?
8. List out the rules to be followed in forming an identifier.
9. How is a structure different from an array?
10. What is the difference between function declaration and function definition?

Part – B (5 x 16 = 80 marks)

- 11 Describe the basic computer organization of a digital computer with necessary diagram. (16)

12.a i) Multiply the binary numbers 1010 and 1001. (8)

ii) Divide the binary numbers 10001 by 110. (8)

(OR)

12.b i) What is software? Describe the types of software with examples. (12)

ii) State the software development steps. (4)

13 a i) Draw, name and define the basic flow chart symbols. (8)

ii) There are 100 employees in an organization. The organization wants to distribute annual bonus to the employees based on their performance. The performance of the employees is recorded in their annual appraisal forms. Every employee's appraisal form contains his/her basic salary, and the grade for his/her performance during the year. The grade is of three categories – 'A' for outstanding, 'B' for good, and 'C' for average performance. It has been decided that the bonus of an employee will be 100% of the basic salary for outstanding performance, 70% of the basic salary for good performance, 40% of the basic salary for average performance, and zero for all other cases. Write an algorithm to calculate and print the total bonus amount to be distributed by the organization. (8)

(OR)

13 b i) Describe the features of a word processor and spread sheet software package. (16)

14 a i) Write a C program to print all prime numbers between 2000 and 5000. (8)

ii) What is the purpose of **switch-case** statement? What are the rules associated with it? Give an example. (8)

(OR)

14 b i) What is loop in programming? Write while, for and do-while loops' syntaxes. Write a loop to find the sum of digits of a number, using each of these three types of loops separately and do the comparisons. (10)

ii) Write a C program to find the roots of a given quadratic equation. (6)

15 a i) Write a function to sort an array of integers in ascending order. (8)

ii) Write short notes on preprocessor directives. (8)

(OR)

15 b i) Discuss about all possible pointer arithmetic operations and their results. (8)

ii) Write a C program to define a structure named **time** that contains three **int** members and declare an instance of type **time** named *dateOfBirth*. Obtain values for the instance and display the accepted values in a neat format. (8)