

***B.Tech. Degree I&II Semester Examination in
Marine Engineering May 2013***

MRE 109 COMPUTER FUNDAMENTALS

Time : 3 Hours

Maximum Marks : 100

(5 x 20 = 100)

- I. (a) Explain the different functional units of a computer.
(b) Differentiate between application software and system software with examples.
- OR**
- II. (a) Explain the different types of computer networks.
(b) Explain the different types of programming languages.
- III. (a) Write a program to add 'n' numbers using 'while' loop. Convert this program to use 'do while' and 'for' loop.
(b) Explain the different fundamental data types used in C.
- OR**
- IV. (a) Explain the different looping statements.
(b) Write a program to find fibonacci series and print only the nth fibonacci number.
- V. (a) Explain the different parameter passing mechanisms with examples.
(b) Write a program to check whether a given number is prime or not using function.
- OR**
- VI. (a) Write a recursive function to find factorial of a given number.
(b) Explain the different storage classes with example.
- VII. (a) Write a program to find a ranklist of *n* students. Input marks for 3 subjects with student name and roll no. Calculate total marks and percentage of marks. Rank list should be print with Rank no., student name and percentage of mark.
(b) Write a program to multiply 2 matrices using pointer.
- OR**
- VIII. (a) Write a program to perform selection sort.
(b) Explain the concept of pointer. Find sum of *n* numbers using pointer.
- IX. (a) Distinguish relational and network models.
(b) Distinguish SQL and relational algebra.
- OR**
- X. (a) Explain concepts of encapsulation, polymorphism and inheritance in OOP.
(b) Write a program to find area of geometrical figures using polymorphism.
