

## ***B.Tech Degree I & II Semester Examination in Marine Engineering June 2012***

### **MRE 109 COMPUTER FUNDAMENTALS**

Time : 3 Hours

Maximum Marks : 100

- I. (a) Explain the functions of different components of a basic computer system with the help of a block diagram. (12)
- (b) Discuss the terms machine language, assembly language and high level language. (8)
- OR**
- II. (a) Explain the functions of a typical operating system. (10)
- (b) Discuss the terms LAN, MAN, WAN and Internet. (10)
- III. (a) Explain fundamental data types in 'C' with examples. (12)
- (b) Explain different relational and logical operators in 'C'. (8)
- OR**
- IV. (a) Write a 'C' program to find the average of 'n' non-zero numbers. (12)
- (b) Explain switch case statement with a suitable example. (8)
- V. (a) Explain different parameters passing mechanism in 'C' with examples. (10)
- (b) Write a function in 'C' to print first 'n' prime numbers. (10)
- OR**
- VI. (a) Explain STATIC and EXTERN storage classes. (12)
- (b) Write a recursive function to find fractional of a number. (8)
- VII. (a) Describe the need for arrays in programming languages. (5)
- (b) Explain selection sort. Write a 'C' program to implement the selection sort. (15)
- OR**
- VIII. (a) Explain pointer to structure with an example. (10)
- (b) Explain arrays of structure with an example. (10)
- IX. (a) Describe the concept of data encapsulation with an example. (10)
- (b) Explain the concept of operator overloading with an example. (10)
- OR**
- X. Write short notes on: (20)
- (i) RDBMS
  - (ii) Structured Query Language
  - (iii) Polymorphism
  - (iv) DDL