B. Tech Degree I & II Semester Examination in Marine Engineering June 2011

MRE 109 COMPUTER FUNDAMENTALS

(All questions carry **Equal** marks)

Time : 3 Hours   Maximum Marks : 100

I.   (a)   Explain the architecture of a typical computer network. What are the various types of networks?
      (b)   Explain the hardware and software components of internet.

OR

II.   (a)   What are the different types of storage devices?
      (b)   Explain functions of an operating system?

III.   (a)   Distinguish float, double and unsigned input data types with example.
      (b)   Write a C program to print first 50 perfect squares?

OR

IV.   (a)   What are enumerated data types? Show an example.
      (b)   Write a C program to print LCM of 2 numbers.

V.   Explain storage classes in C clearly showing their properties with examples.

OR

VI.   Explain the recursive phases with diagram in the computation of first 5 fibonocci numbers using recursion. Clearly explain logic.

VII.   (a)   Explain pointer to structures with examples.
      (b)   Write a C program to find transpose of a matrix.

OR

VIII.   (a)   Distinguish structures and unions.
      (b)   Write a C program to create a structure of 85 students (Number, name, mark1, mark 2, mark 3) and prepare a rank list based on marks.

IX.   (a)   Explain virtual functions in C++ with a program.
      (b)   Write a C++ program to demonstrate multiple inheritance.

OR

X.   (a)   What are the functions of a DBA?
      (b)   What are the advantages of DBMS over flat files?

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