B. Tech Degree I & II Semester Examination in Marine Engineering June 2010

MRE 109 COMPUTER FUNDAMENTALS

Time : 3 Hours Maximum Marks : 100

(All questions carry ***EQUAL*** marks)

I. (a) Draw the basic block diagram of a computer and explain various parts.
(b) Distinguish LAN, MAN and WAN with each other.

OR

II. (a) What are the functions of an operating system?
(b) What are the different ways of internet connection? Also explain the various hardware and software components needed.

III. (a) Explain what is unsigned integer. Clearly specify its features with examples. Also mention other advanced data types.
(b) Distinguish break and continue with examples.

OR

IV. (a) Explain the Switch-Case structure with an example.
(b) Write a C program to implement the following scenario :

if BASIC > 5000, DA = 50%
if BASIC < 5000, DA = 30%
if BASIC > 5000 and <1000 DA = 60%
HRA = 1000 in all cases.

Compute Total Salary of an employee which is Sum of BASIC, DA and HRA.

V. (a) Explain STATIC storage classes.
(b) Demonstrate call by reference.

OR

VI. (a) Explain EXTERN storage classes.
(b) Write a recursive function to print first 10 fibonocci numbers.

VII. (a) Explain pointer to structures with example.
(b) Write a C program to check whether a matrix is symmetric or not.

OR

VIII. (a) Explain the array of structures concept.
(b) Write a C program using array of structures to find the total marks of 5 students and prepare a rank list for them. Inputs are mark 1, mark 2 and mark 3, along with roll no and name. Output is a sorted rank list in descending order of total marks (roll No, name, total marks, rank).

IX. (a) Explain operating overloading in C++.
(b) Write a C++ program to show inheritance with example.

OR

X. (a) Explain the architecture of a DBMS.
(b) Distinguish DDL & DML with example.

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