B.Tech. Degree I & II Semester Supplementary Examination in Marine Engineering April 2021

MRE 1109 COMPUTER FUNDAMENTALS
(2013 Scheme)

Time: 3 Hours

Maximum Marks: 100

$(5 \times 20 = 100)$

I.	(a)	Explain Primary Memory and Secondary Memory in a Computer System.	(15)
	(b)	Explain the different types of Computer Languages.	(5)

OR

II.	(a)	Explain the basic architecture of a computer system.	(10)
	(b)	What is Software?	(2)
	(c)	What is System Software?	(2)
	(d)	Explain Operating System Software.	(2)
	(e)	Explain BIOS.	(2)
	(f)	Explain Bootloader.	(2)

III.	(a)	Explain the various control Statements in C with Example.	(15)
	(b)	Write a program to print the even numbers between a given range x and y.	(5)

OR

IV.	(a)	Explain loops and the various types of loops available in C Programming language in detail.	(15)
	(b)	Write a program to find the factorial of a number entered by the user.	(5)

V.	(a)	Explain linear search and binary search and advantages of linear search over binary search. Write Programs to perform Linear Search and Binary Search.	(15)
	(b)	What are functions? Explain function call by reference and Function call by Value.	(5)

OR

VI.	(a)	What are the various storages classes in C.	(10)
	(b)	Write a program to perform Matrix Multiplication.	(10)

VII.	(a)	Explain the SQL Commands INSERT, SELECT, DELETE and UPDATE in SQL.	(10)
	(b)	What is Relational Algebra? Explain 4 Relational Algebra operations.	(10)

OR

VIII.	(a)	What is Object Oriented Programming? Explain Objects and Classes. What are the difference between Procedural Oriented programming and Object Oriented Programming? What are the advantages of Object Oriented Programming? Explain the fundamental principles of Object Oriented Programming.	(20)

IX.	(a)	Explain File reading functions fopen(),fgetc(),fgets(),fscanf() and fread().	(10)
	(b)	Explain File writing functions fputc(), fputs(), fprintf() and fwrite().	(10)

OR

X.	(a)	Write a program using Structures to read and print records (Age, Name) of 10 students.	(10)
	(b)	What is a Union? How do you define and access members of a Union. Explain with Example.	(10)

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