

**INDIAN MARITIME UNIVERSITY**  
**(A Central University, Govt. of India)**

**B.Tech (Marine Engineering) - Semester V**  
December 2015 Examinations

**Computer Science**  
Subject Code:UG11T2205/UG11T1205

Time : 3 hrs  
Date : 21.12.2015

Max Marks-100  
Pass Marks-50

---

**Part - A Compulsory Question**

1. 10×3=30Marks

- a) Define a computer.
- b) Differentiate between data and information?
- c) Convert  $(76)_8$  and  $(A7)$  to equivalent binary number
- d) How is the 8421 code differs from the 4221 code.
- e) List few devices that can be used as primary.
- f) What is booting ?
- g) Define term network? Give its key advantage.
- h) What are header files? Why are they important?
- i) What will be output

```
Main()
{
    int arr[ ] = {1,2,3,4,5};
    int *ptr, i;
    ptr = arr + 4;
    for (i=4; i>=0; i--)
        printf("\n %d", *(ptr - i));
}
```

- j) Explain the concept of making function call.

**Part - B (5x14 = 70 Marks)**

Answer any five from the following questions

- 2.
- a. With neat diagram explain DRAM.
  - b. Subtract by 2's complement method i)  $10101011 - 01111$ , 7  
ii)  $0111 - 10101011$  iii)  $1010101010 - 111101$  7
- 3.
- a. Broadly classify computer based on their technology. 7
  - b. Describe the OSI model in brief. 7

4.
  - a. How an algorithm is useful in the context of software development? 7
  - b. Write an pseudo code to read the mark of 10 student. If mark is greater than 50, the student passes. Count the number of student passing. 7
  
5.
  - a. Explain with suitable diagram simplex, half-duplex and full-duplex mode of data transmission 7
  - b. Discuss key network topology. 7
  
- 6
  - a. Write a program to calculate sum of cubes of first n numbers. 7
  - b. What are decision control statement? Explain in detail with suitable example. 7
  
7.
  - a. Write a program to read and display 'n' number using an array
  - b. Define a pointer in 'C' programming. What do you understand by void pointer. 9  
5
  
8.
  - a. What is advantage of using structure in 'C' programming 4
  - b. Write a 'C'program calculates the sum of two distances and displays it. 10  
(Takes two distances in inch-feet system and stores in data members of two structure variables.)

\*\*\*\*\*