2008 COCHIN UNIVERSITY OF SCIENCE & TECHNOLOGY

B.TECH ELECTRICAL AND ELECTRONIC ENGINEERING
COMPUTER FUDAMENTALS

TIME: 3 HOUR
MARK: 90

ANSWER ANY SIX QUESTION
ALL QUESTIONS CARRY EQUAL MARKS

MARK [6*15]

1 a. What are the functional units of a computer? Explain the role of each in detail

b. How is the working of compiler different from the working of an interpreter?

c. What is the advantage of using assembly language over machine language?

2 a. Briefly explain how the operating system manages the various resources.

b. What is internet? Discuss the major applications of internet

3 a. With the help of suitable examples illustrate the logical operators used in C

b. Name and describe the basic data types in C

c. What are the three different classes of statements in C? Describe the composition of each

4 a. What is the purpose of break statement? Within which control statement can it be included?

b. Write a switch statement that will examine the value of a character type variable named perfomance and prints one of the following messages depending on character assigned to the variable perfomance:

POOR- if either p or P is assigned to performance
AVERAGE- if either a or A is assigned to performance
GOOD- if either g or G is assigned to performance
BEST- if either b or B is assigned to performance

5 a. What are function prototypes? what is their purpose? Where within a program are function prototypes normally placed?

b. Write a recursive program to find n'th Fibonocci number

6 a. What is the purpose of an external variable? What is its scope?

b. What is the difference between parsing an array to function and parsing a single valued data item to a function?

7 a. How are multi dimensional arrays defined? Compare with one dimensional arrays

b. Write a program to read the mark of 3 subjects and compute average mark for 50 students in a class and sort them in descending order. Display also the topper

8 a. What is a union? How does it differ from a structure?

b. Explain how a multidimensional array can be expressed by an array of pointers using suitable example

9 a. Discuss the different database models used in detail

b. Explain the basic structurre of an SQL expression

10. What is relational algebra? Describe the fundamental operation with example.