Total No. of Pages :3

B. Tech. Ist Semester (Main) Examination Feb.- 2010
Computer Programming and IT
(Common to all Branches of Engineering)
1E1024

Time : 3 Hours

Maximum Marks : 80

Min. Passing Marks : 24

Instructions to Candidates:

*Attempt overall **Five** questions selecting one question from each unit. All questions carry **equal** marks.*

Unit - I

1. a) Define block diagram of computer system. (4)

    b) Explain various types of memory in detail. (4)

    c) Explain low level, assembly and concept of High level programming languages briefly. (8)

OR

    a) Explain briefly about compiler, assembler and interpreter. (8)

    b) Make a flowchart to find maximum number among 3 numbers. (8)

Unit - II

2. a) Convert the following :- (4×2=8)

    i) $(276.65)_8$ to Decimal

    ii) $(1101110.1010)_2$ to Octal

    iii) $(FB9.EC)_{16}$ to Octal

    iv) $(725.36)_8$ to Binary

    b) Write short notes on BCD, ASCIT and EBC.DIC codes. (8)

OR

a) Subtract 259_{10} from 798_{10} using, $(r-1)$'s complement method. **(4)**

b) Subtract 1110101_2 from 10001010_2. **(4)**

c) What is bit in computer technology? How many different patterns of bits are possible with **(8)**

   i) 6 bits

   ii) 8 bits.

Unit - III

3. a) Explain structure of program in C language briefly. **(8)**

   b) Write a program that given (Inputted) number is prime or not. **(8)**

OR

a) Write a program to generate the following pattern. **(8)**

```
* * * * * * * * *
  * * * * * * *
    * * * * *
      * * *
        *
```

b) Write a program to generate following pattern. **(8)**

```
        1
      2 3 2
    3 4 5 4 3
  4 5 6 7 6 5 4
5 6 7 8 9 8 7 6 5
```

Unit - IV

4. a) What is array? What are the advantages of array? Write a program to find maximum value from *n* values in array. (8)

   b) What is pointer? Discuss advantages of pointer. (8)

OR

a) Explain call by value and call by address. (8)

b) Write some records of employee like name, address, age & salary in a file. Read that records from file again and display. (8)

Unit - V

5. a) Define storage class in user define function. (8)

   b) Write a program of reverse of a number using function. (8)

OR

Write a program that a number (i.e. 153) is Amstrong number of not using user defined function return value. (16)