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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 Armstrong number or not using user defined function return value. (16)
