

## FCP-2012-1 DEC

Roll No. ....

Total Pages : 3

BT-1/D-12

8013

### FUNDAMENTAL OF COMPUTERS & PROGRAMMING IN C

Paper-CSE-101E

Time Allowed : 3 Hours] [Maximum Marks : 100

**Note** : Attempt **five** questions in all, selecting at least **one** question from each Unit. All questions carry equal marks.

#### UNIT-I

1. (a) Explain the complementary number representation in Computer systems. How negative numbers are represented ? 10  
(b) Differentiate between Windows and Linux operating system. 10
2. (a) Convert :
  - (i)  $(732.25)_{10} = ( )_8$
  - (ii)  $(2BD)_{16} = ( )_{10}$
  - (iii)  $(110101.100101)_2 = ( )_{16}$
  - (iv)  $(294.4861)_{10} = ( )_2$
  - (v)  $(8932)_{10} = ( )_{16}$  10  
(b) Explain the main features of UNIX operating system. 10

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#### UNIT-II

3. (a) What are the main differences between the working of Interpreter and Compiler ? 10  
(b) What is the main role of Linker and Loader ? 10
4. (a) Write short notes on hub, switch and router. 7.5  
(b) Compare Transmission Control protocol (TCP) and Internet Protocol (IP) 7  
(c) What Protocols are used in email ? Discuss in brief. 5.5

#### UNIT-III

5. (a) What is Recursion ? Explain with the help of sample program. 10  
(b) Write a program to convert a given four digit decimal number into binary. 10
6. (a) Explain typecasting with the help of example. 5  
(b) Using an example, explain local and external variables and also give their scope. 5  
(c) Write a program for Matrix multiplication. 10

#### UNIT-IV

7. (a) Write a C program to compare two strings without using strcmp( ). 10  
(b) Differentiate between structure and union. Write the syntax for the declaration of structure and union. 10

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8. (a) How files are managed in C language ? What are their utilities ? 10

(b) Explain the operation of following functions :

(i) fopen( )

(ii) getc( )

(iii) putw( )

(iv) fscan( )

(v) ftell( ) 10