

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

- (a) Explain the complementary number representation in Computer systems. How negative numbers are represented? 10

(b) Differentiate between Windows and Linux operating system. 10
- (a) Convert :

 - $(732.25)_{10} = ()_8$
 - $(2BD)_{16} = ()_{10}$
 - $(110101.100101)_2 = ()_{16}$
 - $(294.4861)_{10} = ()_2$
 - $(8932)_{10} = ()_{16}$

(b) Explain the main features of UNIX operating system. 10

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

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