Roll No. .... Total Pages : 3

BT-2/M-14   **8213**

FUNDAMENTALS OF COMPUTERS AND PROGRAMING IN C

Paper–CSE-101-E

Option–I

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) Draw a block diagram to illustrate the basic organization of a computer system and explain the functions of the various units. 10

   (b) Write a short note on classification of computers. 5

   (c) What is an operating system? Why is it necessary for a computer system? 5

2. (a) Convert the following numbers to their binary equivalent :

   (i) $2AC_{16}$

   (ii) 2513_8

   (iii) FAC_{16}

   (iv) 652_2. 12

8213/K/1324/13,500   P. T. O.

   (b) Write the following conversions :

   (i) $ABC_{16} = ?_8$

   (ii) $152_6 = ?_4$ 8

UNIT–II

3. (a) What are the advantages and limitations of high level languages as compared to machine and assembly languages? 5

   (b) What is an interpreter? How does it differ from a coupiler? 5

   (c) Explain the following terms : 10

   (i) Debugger

   (ii) Linker

   (iii) Loader

   (iv) Assembler.

4. (a) What is FTP? List the steps involved in downloading/uploading a file by using FTP service. 10

   (b) Discuss the services provided by the internet. 10

UNIT–III

5. (a) Write a program in C to calculate the factorial of a number. 10

   (b) Explain the various types of loops and their applications. 10

6. (a) Differentiate between call by value and call by reference. 8

8213/K/1324/13,500   2

(b) What do you mean by a function? How functions are declared? Explain with example. 12

UNIT-IV

7. (a) Differentiate between structures and array. 8

(b) Write a program in C to merge the contents of the two files in the third file. 12

8. (a) Explain the different file operations. 10

(b) Write a short note on unions and enumerations. 10