24006

B. Tech. 2nd Semester F Scheme Examination,

May–2014

FUNDAMENTALS OF COMPUTER & PROGRAMMING IN 'C'

Paper–CSE–101–E

Common for all Branches

Time allowed : 3 hours] *[Maximum marks : 100*

Note : *Attempt **five** questions in all. **Question 1 is compulsory** and attempt atleast **one** question from each section.*

1. Attempt *all* parts : 2×10=20

   (a) Differentiate between while () and do-while () statement

   (b) Differentiate between structure and union.

   (c) Differentiate between formatted and unformatted I/O functions. Name few of them.

   (d) What is a pointer ? Explain difference between printf ("%d",*p) ; and printf ("%d", p) ;

   (e) What are the functions of linker and loader ?

   (f) Differentiate between left shift and right shift operator with example.

   (g) Differentiate between arrow and dot operators. Where they are used ?

(h) What are reserved words ? What is the limitation imposed upon them ?

(i) What function is served by repeater and hubs ?

(j) What is macro ?

Section–A

2. (a) Elucidate different modes of operation of a computer ? 6

(b) What is a language processor ? Explain different types of language processors. 7

(c) Explain memory hierarchy. 6

3. (a) Explain function of a microprocessor and all generations of microprocessors. 10

(b) Explain the layered structure of UNIX. How security is ensured and write five commands. 10

Section–B

4. (a) What is data communication ? Enlist all the requirements of establishing an internet connection. 10

(b) What do you mean by network topology ? Explain star and tree topology with their advantages and disadvantages. 10

5. (a) Explain the difference between TCP and UDP. 10

(b) Explain TCP/IP model. 10

Section–C

6. Write a program using structures and function for gathering all the information of all the books in the library including book title, author name, publisher name, date of printing, edition number, cost of book, number of copies of each book. 20

7. (a) Write a program to find whether a given string is palindrome or not using user defined function. 10

(b) Write a program for multiplication of two 3*3 matrices. 10

Section–D

8. (a) Write a program to read a file, count number of lines, number of words, number of characters and white spaces till the end of file is encountered. 12

(b) Explain the concept of dynamic memory allocation. 8

9. (a) Explain various file operations with an example. 10

(b) Write a program that accepts two one dimensional arrays and find the sum of corresponding elements, and this sum is stored in the third array. Finally, it prints the resultant array. This program uses dynamic memory allocation. 10