24006

B. Tech. 2nd Semester (Common for all Branches)

Examination – May, 2017

FUNDAMENTALS OF COMPUTER & PROGRAMMING IN 'C'

Paper : CSE-101-F

Time : Three Hours]   *[Maximum Marks : 100*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt *five* questions in all, selecting *one* question from each Section. Question No. 1 is *compulsory*. All questions carry equal marks.

1. (a) What are the unique features of Linux ? $2 \times 10 = 10$

   (b) What is URL ? What is its relevance to internet ?

   (c) Code written in Machine Language is efficient and fast to execute, Comment.

   (d) Briefly describe that how Array can be passed to the function.

     P. T. O.

(e) What is the difference between Logical AND and Bitwise AND ?

(f) Why header files are included in C programming ?

(g) Why do we need signed and unsigned char ?

(h) Describe any one method to check for EOF when reading a file.

(i) Write a short note on nested structures.

(j) What is the role played by Modem in Networking ?

SECTION – A

2. (a) Write the functions of an operating system. Differentiate between internal and external DOS commands. 10

(b) Explain in detail about multiprogramming, multiprocessing, timesharing and real time systems. 10

3. (a) Explain with the help of diagram that how RAM, ROM and CPU interact with each other. Also explain the importance of system bus and main memory in functioning of processor. 15

(b) Explain the working of Magnetic Disk. 5

SECTION – B

4. (a) What are the advantages of Networking ? Also explain different devices used for Networking. 15

(b) In what situations must the network have a gateway ? 5

5. (a) Compare OSI model with TCP/IP model. 10

(b) Explain the term Programming Language. Give certain examples of such languages. 10

SECTION – C

6. (a) Write a program to calculate the total number of elements in a multidimensional array ? 8

(b) What are conditional operators ? Give its syntax and application with an example. Why the expressions in the conditional operator are called ternary ? 12

7. (a) Why the parameters given within a function prototype are called "dummy" parameters. 6

(b) Write about formatted and unformatted input/output functions in 'C'. 7

(c) Explain logical and bit operators in 'C' with examples. 7

SECTION – D

8. (a) What are pointers to functions ? Explain with example. 5

(b) Write short notes on the following : i) malloc ( ) and calloc ( ) functions. 5

(c) Write a program in 'C' to store the roll no. and marks of 5 subjects in a file. Read the contents of file and display the roll no. and total marks obtained by each student in a class. 10

9. (a) Write a 'C' program to swap two numbers using call by pointers method. 8

(b) Explain the concept of Pointers. Also explain operations on pointers and array of pointers. 12

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