G 1581 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2016

Fourth Semester

Branch : Electrical and Electronics Engineering

EE 010 406 – COMPUTER PROGRAMMING [EE]

(New Scheme – 2010 Admission onwards)

[Regular/Improvement/Supplementary]

Time : Three Hours Maximum : 100 Marks

Write neat and efficient C-programs wherever needed.
Draw neat flow charts for the programs.

Part A

Answer **all** *questions.*
Each question carries 3 *marks.*

1. Explain unary and binary operators in C.
2. Describe *two* ways to include comments in a C program.
3. What is the difference between a function declaration and its definition?
4. How do you access memory address of a variable?
5. Explain how the end of a file is determined.

(5 × 3 = 15 marks)

Part B

Answer **all** *questions.*
Each question carries 5 *marks.*

6. Distinguish between variables, constants and keywords, giving appropriate examples.
7. Explain how 1D and 2D initialisation can be done, with the help of examples.
8. What is meant by function pointer? Give example and explain.
9. Explain dynamic memory allocation in C.
10. Describe any *five* file handling functions with the help of examples.

(5 × 5 = 25 marks)

Turn over

Part C

Answer **all** *questions.*

Each full question carries 12 *marks.*

11. (a) Describe all the format specifiers of scanf ( ) and printf ( ) with examples.

    (b) What is a pseudocode? What are the merits and limitations of pseudocode? Give examples.

(6 + 6 = 12 marks)

Or

12. Write a C program to generate and print all the three-digit Fibonacci numbers.

13. Write a program to accept a message and encode it by adding the value 3 to each character in the input message. Display both the input and encoded messages.

Or

14. Write a C program to read a matrix and interchange any *two* rows *or* columns and display the new matrix.

15. Write a recursive function to obtain the sum of first 100 natural numbers.

Or

16. Write a function using pointers to add two matrices and to return the resulting matrix to the calling function.

17. Write a C program to create a single linked list to read a set of N integers and print the list, where the number N should be obtained from the user.

Or

18. Write a program to sort a set of mark sheets of '*n*' students. The mark sheet consists of the register number, name, marks for 8 subjects and the total marks. Make use of a structure to develop the program.

19. Write a program that copies one text file to another and inserts blank lines between paragraphs in the new file. Paragraphs are identified using a new line character.

Or

20. Write a program that will receive a file name and a line of text as command line arguments and write the text to the file.

[5 × 12 = 60 marks]