D 32954 (Pages : 2) Name.....

Reg. No.....

THIRD SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION DECEMBER 2012

CE 04 302—COMPUTER PROGRAMMING IN C

(Common to all except CS/IT/PT)

Time : Three Hours Maximum : 100 Marks

Answer **all** *questions.*

I. (a) What is an interpreter ? How does it differ from a compiler ?

(b) Why are high level languages easier to use ?

(c) State the various types of constants in C. Explain with examples.

(d) List the relational operators used in C and explain their precedence relationship.

(e) Explain the syntax and use of the switch statement with an example.

(f) State the uses of break statement in C.

(g) Define a string and with examples illustrates the declaration of strings.

(h) Explain the functions strlen ( ), strcpy ( ), and strcmp ( ) with examples.

(8 × 5 = 40 marks)

II. (a) What is an input interface ? How does it differ from an output interface ? (8 marks)

(b) What is a flowchart ? What are the various symbols used in flowcharting ? Give their pictorial representation.

(7 marks)

Or

(a) Describe the function of the various flowcharting symbols. (5 marks)

(b) Why are there standards for the symbols used in drawing flowcharts ? (5 marks)

(c) What is a subroutine ? How do subroutines help in program writing ? (5 marks)

III. (a) (i) What would be the value of X after execution of the following statements ?

int $x, y = 10$;

char $z = 'a'$;

$x = y + z$.

(ii) How do variables and symbolic names differ ?

(8 marks)

(b) (i) What is a variable and what is meant by the "value" of a variable ?

(ii) Describe the four basic data types. How could we extend the range of values they represent ?

(7 marks)

Or

Turn over

(a) Write a program to convert a decimal number to a binary number. (8 marks)

(b) Write a program to find the perfect square using if-else statement. (7 marks)

IV. (a) What are the different types of functions ? Explain the use of return statement with an example.

(8 marks)

(b) State the important points to be noted while using functions. (7 marks)

Or

(a) Write a program to swap two numbers using functions. (7 marks)

(b) Write a program to search an element using binary search method using recursive functions.

(8 marks)

V. (a) Write a program to find the smallest number and its position in an array. (5 marks)

(b) Write a program to compare two strings using string functions. (5 marks)

(c) Explain the process of initializing a string. (5 marks)

Or

Define a structure called student that will describe the following information student name, class, roll no., subject marks and total. Using student declare an array stu–list with 30 elements. Write a program in C to read the information about all the 30 students and to display the information.

(15 marks)

[4 × 15 = 60 marks]