Reg. No. : | | | | | | | | | | |

Question Paper Code :Z 8420

B.Sc. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2009.

First Semester

Computer Technology

BCS 115 — PROGRAMMING IN C

(Common to B.Sc. Information Technology)

(Regulation 2003)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is pseudo code?
2. Give some examples for software resource.
3. What are the uses of modular programming?
4. List out the rules to be followed in forming an identifier.
5. Differentiate binary operator from unary operator.
6. Is it possible to have negative indices in arrays? Give reasons.
7. Give the similarities between structure and union.
8. What are the advantages of using pointers in a program?
9. Which function should be used to free the memory allocated by calloc()?
10. What are the different modes of opening a file for processing?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Enumerate the properties of an algorithm. (4)

(ii) Write an algorithm to multiply two N x N matrices. (12)

Or

(b) (i) Discuss the characteristics of High level languages. (6)

(ii) Draw the flow chart that would list down the sequence of steps to be followed to sort the students name in alphabetical order. (10)

12. (a) (i) List out the characteristics of C language. (6)

(ii) Explain the different data types used in C language? Give examples. (10)

Or

(b) (i) Explain about operator precedence and associativity of operators with examples. (10)

(ii) Find the values of the following expressions. Take 8 bits for the bit pattern. (1) ~4 & 6 (2) 5 | 8 (3) 2^15. (6)

13. (a) (i) Explain in detail the different forms of looping statements in C Language. (10)

(ii) Write a program to find the Factorial of a number. (6)

Or

(b) (i) How are the elements stored in a two-dimensional array? Explain with an example. (8)

(ii) Write a C program to find the transpose of a matrix (8)

14. (a) Write short notes on the following :

(i) Array or Pointers. (8)

(ii) Self referential structure. (8)

Or

(b) Explain the uses of any 8 built-in functions in the C Library. Give suitable examples. (16)

15. (a) Explain the following file commands usage with an example. (16)

(i) fseek (ii) ftell (iii) rewind (iv) fgetc.

Or

(b) Write a program to perform the following operations in a singly linked list. Create your own structure to perform the opreations.

(i) Insertion

(ii) Deletion. (16)