

B.A./B.Sc. 2nd Semester

COMPUTER SCIENCE (Programming Using C)

Time Allowed—3 Hours]

[Maximum Marks—75

Note :— (1) Attempt any 5 questions.

(2) All questions carry equal marks.

1. (a) What are Decision Tables ? How are these different from flowcharts ? Illustrate the use of each through suitable examples. 9
- (b) Find out the values of X, Y and Z in the following :
 $(9A.4)_{16} = (X)_8 = (Y)_{10} = (Z)_2$, 6
2. Explain the following :
 - (a) ASCII Character Code 7
 - (b) Decision Tables. 8
3. (a) What are 'data-types' ? What are the data-types supported by C language ? Illustrate the importance of each. 8
- (b) What is meant by hierarchy of operators ? Provide a brief outline of all operators supported by C language along with their hierarchy within expressions and suitable examples. 7

4. Explain the following :

(a) Types of Programming Errors 7

(b) Pointers with Structure. 8

5. (a) Why is 'C' language named so ? Discuss its origin and provide the general structure of 'C' language program detailing out every construct in it. 10

(b) What are the technical reasons for adopting Binary Number system in Digital Computers ? Explain. 5

6. Differentiate between the following :

(a) Union and Structures

(b) Automatic, External and Static variables

(c) Call-by-value and Call-by-reference. 15

7. Explain the following :

(a) Recursion 7

(b) Formatted Console I/O Functions. 8

8. Differentiate between the following :

(a) printf() and scanf() 5

(b) switch and if-else-if statements 5

(c) for and do-while loops. 5