(i) **Printed Pages : 3**   Roll No. ....

(ii) **Questions   : 9**   **Sub. Code :** | 0 | 1 | 8 | 4 |

Exam. Code : | 0 | 0 | 0 | 2 |

B.A./B.Sc. (General) 2ⁿᵈ Semester

1046

INFORMATION TECHNOLOGY

Paper–B : Computer Programming Using C

Time Allowed : Three Hours]   **[Maximum Marks : 65**

Note : Attempt **five** questions in all by selecting **one** from each of the Sections A, B, C and D respectively. Section E is compulsory.

SECTION–A

1.   (a)   What do you mean by problem solving ? What are the strategies for problem solving ?   6

(b)   Explain the following terms :

(i)   Top down design

(ii)   Stepwise refinement   7

2.   (a)   Differentiate between a program and an algorithm.   6

(b)   What is Programming Language ? Discuss programming language classification.   7

SECTION–B

3.   (a)   Explain the basic structure of C program with suitable examples.   6

(b) What is Data Type ? Discuss basic data types supported by C language. 7

4. (a) Discuss Arithmatic and Relational Operators in detail. 6

(b) Discuss various control structures of C. 7

SECTION–C

5. What are functions ? Discuss various types of functions supported by C. What are the two methods for passing arguments to function ? Explain. 13

6. (a) What is recursion ? Explain the concept of recursion with the help of calculating factorial of a given number. 6

(b) Write short notes on the following :

(i) Pointer and Pointer Arithmetic.

(ii) Arrays of Pointers. 7

SECTION–D

7. (a) What is Structure ? How is it declared in C program ? How structures are passed to the function ? 6

(b) What is type def and enumerated data types ? Discuss. 7

8. (a) What do you mean by preprocessor directives ? Discuss with suitable example. 6

(b) How are files handled using C program ? What are various file accessing functions associated with it ? Discuss. 7

SECTION–E

9. Answer the following in brief.

   (i)   Header files in C.

   (ii) What is an array ?

   (iii) What is the use of typecasting in C ?

   (iv) Storage classes in C.   3,3,3,4