

(i) Printed Pages: 3

Roll No.

(ii) Questions : 9

Sub. Code :

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Exam. Code :

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B.A./B.Sc. (General) 2nd Semester

(2042)

INFORMATION TECHNOLOGY

Paper-B Computer Programming using C

Time Allowed : Three Hours]

[Maximum Marks : 65

Note :— The students are required to attempt **ONE** question each from Sections A to D and the Compulsory Question.

SECTION—A

1. (a) Explain the steps in solving a problem on the computers. 7
(b) How do you test a program ? Discuss. 6
2. (a) What is modular design ? What are its benefits ? 7
(b) Explain program documentation. 6

SECTION—B

3. (a) Describe the different format specifier of scanf() with the help of suitable example. 7
(b) What is an operator in C ? Explain various types of operators available in C. 6

4. (a) Differentiate between switch and if-else-if ladder. Illustrate with example. 7
- (b) Describe reading and writing of 2 dimensional array. 6

SECTION—C

5. (a) What is recursion ? What are its benefits and explain the concept with appropriate example ? What can happen in case the terminating condition is not met while performing recursion ? 7
- (b) What is the relationship between an array name and a pointer ? How is an array name interpreted when it appears as an argument to a function ? 6
6. (a) Explain the concept of array of pointers. How it is useful ? 7
- (b) Explain the functions calloc() and malloc() with the help of appropriate examples. 6

SECTION—D

7. (a) What is a structure ? What are its benefits ? How do you pass structure to a function ? Discuss. 7
- (b) What is conditional compilation ? What pre-processor directives are available for this purpose ? 6
8. (a) Write a C language program to search an element in linked list. 7
- (b) What are text and binary files ? Also explain the various problems while opening a file. 6

(Compulsory Question)

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| 9. | (a) Differentiate between algorithm and flowchart. | 2 |
| | (b) What do you mean by function prototype ? | 2 |
| | (c) What is type casting ? | 2 |
| | (d) What is a void pointer ? | 2 |
| | (e) What is argc and argv ? | 2 |
| | (f) What are the various file opening modes ? | 3 |