

(i) Printed Pages : 2 Roll No.

(ii) Questions : 9 Sub. Code :

8	6	8	4
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Exam. Code :

1	2	1	9
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PGDCA 1st Semester

(1129)

COMPUTER PROGRAMMING USING C

Paper—PGD-1102

Time Allowed : Three Hours] [Maximum Marks : 60

Note :— Attempt **FIVE** questions in all, including question No. **9** in Section-**E**, which is compulsory and taking one each from Section **A** to Section **D**.

SECTION—A

1. (a) What is the difference between an algorithm and a flowchart ?
Write an algorithm to find the greatest of 3 numbers.
- (b) Briefly explain with examples the various iterative control constructs. 6,6
2. (a) What are relational operators ? How are they used ? List various relational operators used in C-language ? Give example to illustrate your answer.
- (b) What are the various data types available in C ? Also, state their memory requirements and range. 6,6

SECTION—B

3. (a) How can parameters be passed to functions using call by value and call by reference ? Explain with an example.
- (b) What are one dimensional and two-dimensional arrays ? Write a program to multiply two 3*3 matrices. 6,6
4. (a) What is a function ? What is the difference between library and user defined functions ?

- (b) What are pointers ? Discuss pointer arithmetic giving examples. 6,6

SECTION—C

5. (a) What are structures ? How can we access and initialize the structure elements ? Explain using examples.
(b) Explain giving examples the following string functions :—
strlen (), strcmp (), strcpy (). 6,6
6. Differentiate between :
(a) Array and structures
(b) Structures and Union
(c) Array of structures and array in structures 4,4,4

SECTION—D

7. (a) Discuss the various unformatted console I/O functions giving examples.
(b) What is File ? Discuss the various steps in processing a file. 6,6
8. (a) What are various file opening modes ? How can you write an integer to a file ?
(b) Explain the following functions : sprintf (), sscanf (), gets () and puts (). 6,6

SECTION—E

9. (a) What is the purpose of stdio.h and math.h files in C ?
(b) What are arrays of pointers ?
(c) What are conditional compilation directives ?
(d) What do you understand by nested structures ?
(e) What is the purpose of file pointers ?
(f) What is recursion ? 6×2=12