0702<br>POST GRADUATE DIPLOMA IN COMPUTER APPLICATION<br>EXAMINATION, 2019 PROGRAMMING \& PROBLEM SOLVING THROUGH "C" LANGUAGE<br>Paper - II<br>Time: Three Hours<br>Maximum Marks: 75

PART - A (खण्ड - अ)

Answer all questions (50 words each).
All questions carry equal marks.
सभी प्रश्न अनिवार्य हैं। प्रत्येक प्रश्न का उत्तर 50 शब्दों से अधिक न हो।

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\begin{align*}
& \text { सभी प्रश्नों के अंक समान हैं। } \\
& \text { PART-B (खण्ड - ब) } \tag{Marks:35}
\end{align*}
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Answer five questions ( 250 words each).
Selecting one from each unit. All questions carry equal marks.
प्रत्येक इकाई से एक-एक प्रश्न चुनते हुए, कुल पाँच प्रश्न कीजिए।
प्रत्येक प्रश्न का उत्तर 250 शब्दों से अधिक न हो।
सभी प्रश्नों के अंक समान हैं।
PART - C (खण्ड - स)
[Marks: 20]
Answer any two questions ( 300 words each).
All questions carry equal marks.
कोई दो प्रश्न कीजिए। प्रत्येक प्रश्न का उत्तर 300 शब्दों से अधिक न हो।
सभी प्रश्नों के अंक समान हैं।

## PART - A

Q. 1 (i) What is Debugging?
(ii) Define prime number.
(iii) Define Nested loops.
(iv) Differentiate between variable and constant.
(v) Define Array.
(vi) What is modular programming?
(vii) What is Union?
(viii) Define pointer assignment.
(ix) Define Linked list.
(x) What is meant by File processing?

## PART - B

UNIT -I
Q. 2 What is a flow chart? Explain various symbols used in flow chart.

## OR

Write short notes on-
(i) Basic model of computation.
(ii) Algorithm for Fibonacci sequence.

UNIT -II
Q. 3 Discuss various operators in C.

## OR

Explain switch statement with an example.

## UNIT -III

Q. 4 Write a C program to find the largest element in an array.

## OR

Write short notes on:-
(i) Prototype of a function
(ii) Call by value and reference
(iii) Formal parameter list.

UNIT -IV
Q. 5 Discuss structure in C with example.

## OR

Explain array and pointers with example.
UNIT -V
Q. 6 Write a note on self-referential structures.

## OR

Discuss the file processing.

## PART - C

Q. 7 (a) Write an algorithm to find GCD (Greatest Common Division) of two numbers.
(b) Write a note on algorithms and documentation.
Q. 8 (a) Differentiate between while and do-while loops with example.
(b) Write a C program to test whether a given three digit number is Armstrong or not.
Q. 9 Write a C program to multiply two $3 \times 3$ matrix.
Q. 10 Write short notes-
(i) Array of structures
(ii) Function and pointers
Q. 11 (a) Discuss the creation, insertion and deletion for linked list with example.
(b) Explain various mode of file opening.

