

Roll No. _____

17/1572

**P.G.D.C.A/M.C.A. Second Semester
Examination, 2017
First Paper
(Programming in C)**

Time : Three Hours

Maximum Marks : 100

Note: Answer **five** questions in all. Short answer type **Question No.1** carrying 40 marks is **compulsory**. Answer **one** question carrying 15 marks from each Unit.

Note: The answers to short questions should not exceed 200 words and the answers to long questions should not exceed 500 words.

1. Give short answer of the following:
4×10=40
- How we can maintain abstraction mechanisms in programming?
 - What is step-wise refinement?
 - Mention the difference between syntax and semantics.

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- Explain the structure of 'C' program.
- Describe the precedence and associativity rules.
- What is switch control loop? Give an example.
- Mention the difference between local and global variable with an example.
- What is recursion?
- Explain the functionality of 'C' preprocessor.
- Mention the features of logic languages.

Unit-I

- Describe the top-down modular design with an example. 8
 - What is flow-chart? Write a flow-chart to verify whether a given number is prime or not. 7

OR

- Explain the syntactic elements of a language. 7
 - Give the account of static and dynamic storage management. 3
 - What is an algorithm? Write the algorithm for multiplication table from 1 to 10. 5

Unit-II

4. (a) What are the data types of 'C' language? 5
 (b) Explain the storage classes in 'C'. 5
 (c) Explain the type of instructions in 'C' with example of each. 5

OR

5. (a) Mention the difference between 'for' loop and 'while' loop with example. 5
 (b) Write the syntax of 'IF-Else' structure. Give an example of 'nested-if-else'. 5
 (c) What is the difference between 'break' and 'continue'? Explain with an example. 5

Unit-III

6. (a) What is function? What is the difference between parameterized function and non-parameterized function. 6
 (b) Mention the difference between 'call by value' and 'call by reference' with an example. 6

- (c) Briefly write about any three library functions. 3

OR

7. (a) What is the pointer? Write a 'C' program to describe the use of pointers 7
 (b) What is string? Write C program for
 (i) Calculate the length of a string
 (ii) Copy one string into another string. 8

Do not use library functions.

Unit-IV

8. (a) What is structure? How we can access the member variables of a structure? 5
 (b) Mention four Input-output functions in C. Cite example of each. 4
 (c) Write a program in 'C' to demonstrate the functionalities of a file. 6

OR

9. (a) What are the major programming paradigms? Explain any two of them. 8
 (b) Explain the special features of object oriented languages. 7