

M.C.M. - I CBCS Pattern Semester-I  
**PCMCMT104.1 - Elective-I Paper-IV : Programming Techniques with C**

P. Pages : 2

Time : Three Hours



**GUG/S/24/10760**

Max. Marks : 80

- 
- Notes :
1. All questions are compulsory and carry equal marks.
  2. Draw neat and labeled diagrams wherever necessary.
  3. Avoid vague answers and write answers relevant and specific to questions only.

**Either:**

1. a) What is Data types? Explain different data types available in 'C'. 8
- b) Explain the following. 8
  - i) Interpreter.
  - ii) Compiler.

**OR**

- c) What is problem analysis? Explain how it is different from process analysis. 8
- d) Explain arithmetic and Bitwise operators with example. 8

**Either:**

2. a) What is looping? Explain for loop and while loop with proper syntax and suitable example. 8
- b) Write a program to check number is prime or not. 8

**OR**

- c) What is conditional statement? Write any two types with suitable example. 8
- d) Write a program to check whether the 3 digit number is Armstrong or not. Armstrong number is a 3 digit number  $abc$  then  $abc = a^3 + b^3 + c^3$ .  
(Sum of cube of each digital is equal to the original number). 8

**Either:**

3. a) Define Array? Explain types of Array with suitable example of two dimensional array. 8
- b) Explain the following with proper syntax and suitable example. 8
  - i) Strcmp()
  - ii) Strlen()

**OR**

- c) Define function. Explain the need and advantages of function. 8

- d) Write a program to find factorial of a number using recursive function. **8**

**Either:**

4. a) Define pointer. Explain in detail declaring and initializing of pointer in detail. **8**  
b) Explain in detail command line Argument? With suitable example. **8**

**OR**

- c) Explain the concept of file. What are the various operation performed on file. **8**  
d) What do you understand by 'call by value' and 'call by reference'? **8**

5. Solve all the questions.

- a) What is algorithms? Explain. **4**  
b) What do you mean by nested if? Explain with suitable example. **4**  
c) What do you mean by structure explain. **4**  
d) Explain calloc () and malloc (). Functions. **4**

\*\*\*\*\*