

**Shree H.N. Shukla College of Science**

**M. Sc (Mathematics) (Sem-3)**

**Preliminary Exam**

**MATH.CMT-1001:Prog. in C & Numerical Methods**

## [Time: 2.5 Hours] [Total Marks: 70]

## **Instructions :** (1) All questions are compulsory.

## (2) There are 5 questions.

## (3) Figures on right side indicate full marks .

1 Attempt any seven : 14

(1) Write down names of all C-Tokens.

(2) Give definition of flow chart.

(3)Write down ASCII code for the characters : ‘D ‘ ,’d’ and ‘z’ .

(4) Remove unnecessary paranthesis from following expressions and rewrite them :

(i) ((a-(y/15)+z+w)%2) – (x+25);

(ii) (a\*b) – (c/d);

(iii) x/(z\*y);

(iv) (((a-b)\*p)+q) – (a\*b);

(5) Define the term : Compiler

(6) Write down any six reserved identifiers.

(7) Write a program which can read three integers a,b,c and it can print the values of

a+b+c and ab+cd .

(8) Give name of all three logical operatos with their symbols in C.

(9) Write down all the name of languages which can developed before C language.Also give

Its name of developer.

(10) Give name of all three logical operators with their symbols in C.

2. Answer the following : 14

(a) Write a short note about basic structure of C program.

(b) Write the program for Gauss – Elimination method .

(c)Explain about if…else statement and using it write a program which can find a largest

Number from given three integers.

(d) Write a short note about importance of C language.

3.Attempt the following : 14

1. Explain about while loop statement with its format and syntax.

(b) Write a program which can print first 100 primes .

(c) Write a program which can display tables of 11 to 15 and 16 to 20.

(d) Write a program of false position method .

4.Attempt the following : 14

(a)Write a program which can read two matrices A and B of the size m x n and n x p .

also it can find the product AB of these two matrices .

(b)Discuss about Gauss – Seidel method to solve a system of linear equation

: a11 x1 + a12 x2 = b1

a21 x1 + a22 x2 = b2

(c )Write a program which can find GCD and LCM of given two integers .

(d) Discuss about one – dimensional array and initialization for one – dimensional array.

5.Attempt the following : 14

(a) Discuss about recursion of a function in itself .

(b) Discuss about bisection method . Also write the program for this method .

(c) Write a program which can read an integer and it can print all the divisors of the Given

Integers.

(d) Discuss about N-R method and using its formula find the approximate value of by taking

Initial x0= 2

BEST OF LUCK.