

[4]

SECTION 'C' 4 × 10 = 40

Long Answer questions (Word limit 400-450 words.)

**Q.1.** Explain ANSI rules for the syntax and semantics at the storage user keywords.

**OR**

Explain fixed Vs automatic duration.

**Q.2.** How pointers are declared? Write program using pointers to exchange the values stored in two locations in the memory.

**OR**

Explain following –

- (i) Pointers to pointers                      (ii) Arrays of pointers

**Q.3.** Explain

- (i) Include facility                      (ii) Line control preprocessor

**OR**

Write a program to find greatest common division of two numbers by using function.

**Q.4.** What is linked list? Write a program to create, print and count a linked list.

**OR**

Explain following –

- (i) Buffering  
(ii) Header file  
(iii) Unbuffered I/O random access

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[1]

ROLL NO.....

## MATH. 405/21

IV SEMESTER EXAMINATION, 2021

M. Sc. (MATHEMATICS)

PAPER-V

PROGRA IN C (WITH ANSI FEATURES) II

TIME: 3 HOURS

MAX.- 70

MIN.- 14

**Note:** The question paper consists of three sections A, B & C. All questions are compulsory.

**Section A- Attempt all multiple choice questions.**

**Section B- Attempt one question from each unit.**

**Section C- Attempt one question from each unit.**

SECTION 'A'

MCQ (Multiple choice questions)

2 × 8 = 16

**1.** Which variable in initialized to zero by compiler -

- (a) Auto variable                      (b) Extern variable  
(c) Static variable                      (d) Register variable

**2.** Scope of register variable is

- (a) Entire block  
(b) Entire block and function cell  
(c) Entire file only  
(d) Entire file plus other files where variable is declared.

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3. If  $p_1$  and  $p_2$  are two pointer variable then which expression is valid -

- (a)  $p_1 + p_2$                       (b)  $p_1 - p_2$   
(c)  $p_1 * p_2$                       (d)  $p_1/p_2$

4. If  $p$  is a float pointer variable and its value is 1012. Then value of pointer  $p + 2$  will be

- (a) 1014                              (b) 1016  
(c) 1018                              (d) 1020

5. Function can return -

- (a) Only One Value                (b) Only Two Value  
(c) Only Four Value                (d) Multiple Value

6. Which statement is not true for function -

- (a) Function is declared before main function  
(b) Function must have data type  
(c) Function must have at least one parameter or argument  
(d) Function must have return statement

7. Which one is not I/O function

- (a)  $get c()$                               (b)  $put w()$   
(a)  $freek()$                               (d)  $f printf ()$

8. Which one is error handling function -

- (a)  $rewind()$                               (b)  $free()$   
(c)  $feof ()$                               (d)  $ftell()$

[3]

**SECTION 'B'**

**4 × 6 = 24**

**Short Answer Type Questions (Word limit 200-250 words.)**

**UNIT-I**

**Q.1.** Explain scope and life time of extern variable.

**OR**

Write program which illustrate scope and visibility at extern variable.

**UNIT-II**

**Q.2.** Explain pointer constant pointer value and pointer variable.

**OR**

Write a program to find sum of any n numbers by using pointer

**UNIT-III**

**Q.3.** Explain recursion of function and write a program to find factorial of any number.

**OR**

Write a program where function return multiple values by parameters.

**UNIT-IV**

**Q.4.** Explain how structure is declared and write three benefits to use structure them array.

**OR**

Explain use of  $fseek ()$  function.

