

**8222**

**M.Sc. MATHEMATICS III<sup>rd</sup> SEMESTER  
EXAMINATION, 2019**

**Paper - II**

**Computer Programming in “C”  
(Practical Oriented)**

Time: Three Hours

Maximum Marks: 80

**PART – A (खण्ड – अ)**

[Marks: 20]

*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।

सभी प्रश्नों के अंक समान हैं।

**PART – B (खण्ड – ब)**

[Marks: 40]

*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) Define error.  
(ii) Draw a flow chart for simple if statement.  
(iii) What is a scope of a variable?  
(iv) What is meant by short hand assignment operator?  
(v) What is the use of a '\0' character?  
(vi) Draw control structure of switch.  
(vii) What is function prototype?  
(viii) What is actual parameter?  
(ix) What is the difference between arrays and pointers?  
(x) Define file handle.

## **PART – B**

### **UNIT –I**

Q.2 Define Algorithm. Discuss the properties of algorithm? Also write an algorithm to calculate simple interest?

Q.3 Define Flow chart. Draw a flowchart to check whether the year is leap year or not.

### **UNIT –II**

Q.4 Write the precedence chart of various operators in C.

Q.5 Compare relational and logical operators with example.

### **UNIT –III**

Q.6 Write a program to check whether a given number is Palindrome or not.

Q.7 What is the purpose of the IF-ELSE statement? Compare IF-ELSE with ? : Operator with suitable example.

### **UNIT –IV**

Q.8 Explain Call by value and Call by reference with example.

Q.9 Write a program to generate the Fibonacci series up to n-terms using function.

## UNIT – V

Q.10 Write a program to multiply two matrices of size  $m*n$  and  $n*p$  respectively.

Q.11 Write a C program that copy contents of one file to another file.

## PART – C

Q.12 Write short notes on –

(a) Conversion of Flow chart to language

(b) Properties of algorithm

Q.13 Explain the various data types used in C programming.

Q.14 Write a program to print Pascal's triangle.

Q.15 Write a program to generate the prime series up to n-terms using function.

Q.16 What are the various modes in which a file can be opened explain with examples?

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