

Roll No. :

Total No. of Questions : 11]

[Total No. of Printed Pages : 3

APF-2175

M.A./M.Sc. (Final) Examination, 2022

MATHEMATICS

Paper - Opt.-VIII

(Computer Applications)

Time : 3 Hours]

[Maximum Marks : 70

Section-A

(Marks : 1 × 10 = 10)

Note :- Answer all *ten* questions (Answer limit **50** words). Each question carries **1** mark.

Section-B

(Marks : 3 × 5 = 15)

Note :- Answer all *five* questions. Each question has internal choice (Answer limit **50** words). Each question carries **3** marks.

Section-C

(Marks : 15 × 3 = 45)

Note :- Answer any *three* questions out of five (Answer limit **500** words). Each question carries **15** marks.

Section-A

1. (i) What is the meaning of ASCII Code ?
- (ii) Write function of Address Data Bus.

BR-786

(1)

APF-2175 P.T.O.

- (iii) Give example of a language that is both a compiler as well as an integrator.
- (iv) Write benefit of data abstraction.
- (v) Write data types in C++.
- (vi) Write syntax for conditional if operator.
- (vii) Discuss the need for do-while loop.
- (viii) Define the keyword 'switch'.
- (ix) What is an object in C++ ?
- (x) Define a 'class'.

Section-B

2. Write a brief note on Arithmetic and Logic Unit of a computer.

Or

Give a brief account of open source operating systems.

3. Discuss Polymorphism with an example.

Or

Giving an example, discuss Encapsulation.

4. Discuss character set in C++.

Or

Write a note on Type Conversion in C++.

5. Explain syntax for Goto function in C++.

Or

Write a note on User Defined Functions in C++.

6. How would you create a base class for a project ? Explain.

Or

Discuss Function Overloading in C++.

Section-C

7. (a) Bring out the difference between pseudocode and flowchart. 5
(b) Draw a flowchart for solving a quadratic equation. 5
(c) Write a pseudocode for matrix multiplication problem. 5
8. (a) Write features of Procedural languages. Explain by an example. 5+2=7
(b) Discuss benefits of Object Oriented Paradigm giving an example. 6+2=8
9. Discuss operator Precedence and Associativity for the following operators in C++ giving syntax for each :
- (i) Shift Operator
(ii) Equality operator
(iii) Relational operator
(iv) Multiplicative operator
(v) Additive operator. 15
10. Explain the following giving proper syntax for each :
- (i) Define a one dimensional array.
(ii) Define a two dimensional array.
(iii) Adding data to Array.
(iv) Size of operator.
(v) Creating Arrays of objects. 3×5=15
11. (a) Discuss Constructor Functions
(b) Discuss Destructor Functions.
(c) Write a note on inheritance in C++. 5×3=15