2022

Mathematics

[Honours]

(B.Sc. Third Semester End Examination-2022)

PAPER-MTMH SEC-301

[C-Programming / Object Oriented Programming in C++]

Full Marks: 40   *Time: 02 Hrs*

The figures in the right hand margin indicate marks
Candidates are required to give their answers in their own words as far as practicable
Illustrate the answers wherever necessary

1. **Answer any five questions** $5 \times 2 = 10$

    (a) What are the key features in the C programming?

    (b) What are the basic data type associated with C?

    (c) What is the difference between $++a$ and $a++$?

    (d) Describe the difference between $=$ and $==$ symbol in C programming.

    (e) What is the general form of a function in C?

    (f) What will be the values of p and q ?

    {int p = 7, q;

    $q = ++p$

    Printf ("%d%d", p, q);

}, Is there be any difference between ++p and p++ ? why?

g) What are the difference between switch-case and if else statement.

2. Answer any four questions   4×5 = 20

(a) What are the characteristic of Object oriented programming? What are the advantages of Object oriented programming? 2+3

(b) What are the general description for loop statement and available loop type in C?

(c) What is structure? Can a structure contain a pointer to itself? Write a structure (called time) that includes three variables all of type integer called hrs, Mins and Secs.

(d) What are the difference between pointer and array. Define (i) pointer to a pointer (ii) Dynamic storage allocation.

(e) How the concept of polymorphism is associated with overloading? Which of the operators cannot be overloaded.

(f) What is the difference between C and C++?

3. Answer any one question   1×10 = 10

(a) Write the difference between class and object. Explain the inheritance feature in C++?   8+2

(b) Write down the program segment for the following problem using C++

(i) swaping of two number without using third variable.

(ii) multiplication of two matrices.   2+3+5