Exam. Code : 103204
Subject Code : 1362

B.A./B.Sc. Semester—IV

BIOINFORMATICS

(Computer Programming in C++ & Perl)

Time Allowed—3 Hours] [Maximum Marks—75

Note :— Section A is compulsory and consists of **10** short answer questions. Each question in Section A carries one and half marks. Section B, C, D and E will consist of two questions each. Students are required to attempt any **ONE** question from each respective Section. Each question in Section B, C D and E carries **15** marks.

SECTION—A (Attempt **all** questions)

1. (i) Write precedence of various operators in C++.

   (ii) What is a library function in C++ ?

   (iii) Define destructor in C++.

   (iv) What is the difference between "cin" and "cout" statement in C++ ?

   (v) Write four examples of application software.

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(vi) What is Bioperl ?

(vii) What do you mean by data conversion ?

(viii) What is a multiple inheritance ?

(ix) What are different Meta characters in PERL ?

(x) Name various versions of PERL. 1½×10=15

SECTION—B (Attempt any **ONE** question)

2. (a) Explain the importance of switch case statement. In which situations switch-case statement is desirable ? Give its limitations. 8

   (b) Write a short note on "Goto" statement. As a programmer, would you prefer this statement Justify your answer. 7

3. (a) Write various applications of object oriented programming languages. 8

   (b) Write a program to find whether a string is palindrome or not. 7

SECTION—C (Attempt any **ONE** question)

4. (a) How constructors are different from destructors ? How does inheritance influence the working of constructor and destructor ? 7

   (b) Write a program to explain the function overloading in C++. 8

5. (a) How multiple inheritance is different from single inheritance ? Write small program to show the working of multiple inheritance. 8

   (b) What are access specifiers ? Write the visibility modes of access specifiers in the same class, derived class and outside class. 7

SECTION—D (Attempt any **ONE** question)

6. Discuss Built in file handlers. What is the procedure for reading from and writing to files in PERL ? How reading from sequence of files is done in PERL ? 15

7. (a) Write a program in PERL which reads the in put of 5 integer numbers from a file. Display the numbers in reverse order. 8

   (b) What are integer and float scalar values ? Briefly discuss various operations that can be applied on elements of an array. 7

SECTION—E (Attempt any **ONE** question)

8. What are the different conditional and logical statements available in PERL language ? Discuss their syntax with the help of small example codes in PERL. 15

9. (a) What is a regular expression in PERL ? How is it used in pattern matching ? 10

   (b) Briefly explain subroutines in PERL. 5