(i) Printed Pages : 4]

Roll No. ....

(ii) Questions : 9]

B.A./B.Sc. (General) 3rd Semester Examination

1127

INFORMATION TECHNOLOGY

Paper : A Computer Programming using C++

Time : 3 Hours]   **[Max. Marks : 65**

Note :– Attempt any *five* questions in all including question
No. 9 (Section–E) which is compulsory and selecting
one question each from the remaining Sections–A,
B, C and D.

Section–A

1. (a) What is the use of Friend Function ? Write a
program to exhibit the use of Friend Function.

   (b) What are I/O streams ? How to use I/O streams
   in a program ?

NA–333   (1)   Turn Over

2. (a) What is Inheritance ? Explain the concept with the help of real world examples.

(b) How to pass an object to a function by pointers ? Write an example program.

Section–B

3. (a) What are different types of constructors ? How to use these different types of constructors in a program ?

(b) How privately, publicly and protectively derived classes access the data members of base class ?

4. (a) What is function overloading ? Write a program to exhibit function overloading.

(b) How to overload a binary operator ? Explain with the help of an example code.

Section–C

5. What is Polymorphism ? How to implement polymorphism with the help of virtual and pure virtual functions ? Give example code.

NA–333 (2)

6. (a) How to process a file randomly ? Write a program to exhibit random file processing.

(b) How binary files are different from text files ? How to use files with class objects ? Give example code.

Section–D

7. (a) How array and linked list are represented in memory ? How to access elements in an array and linked list ?

(b) What is a stack ? Write an algorithm to perform push and pop on a Stack.

8. What is a queue ? How is it represented in memory ? What are various operations performed on a queue ? What are the applications of queue ?

Section–E

9. (a) What is static data member ?

(b) What do you understand by nesting of classes ?

(c) What is an inline function ?

(d) Differentiate between early and late binding.

(e) What is a circular linked list ?

(f) What do you understand by complexity ?