

- (b) (i) Write a C++ program to find the perfect square using if-else statement. (8)
 - (ii) Write a C++ program for the generation of Armstrong numbers. (8)
12. (a) (i) Write short notes on the various types of access specifiers. (4)
- (ii) Describe the inline functions and explain how they differ from Macros. (12)

Or

- (b) (i) Explain the different parameter passing mechanisms in detail. (8)
 - (ii) With an example explain about passing objects by reference. (8)
13. (a) Describe with example the different types of constructors. (16)

Or

- (b) (i) Explain the operator overloading with an example. (8)
 - (ii) Write a program to convert Meter to centimeter to illustrate the conversion from basic data type to user defined data type. (8)
14. (a) Explain the types of inheritance and their usability with example. (16)

Or

- (b) (i) What are pure virtual functions? Explain. (8)
 - (ii) Compare and contrast run time polymorphism and compile time polymorphisms. (8)
15. (a) (i) Explain the various file stream classes needed for file manipulation. (8)
- (ii) Write a C++ program to create a file with details of 25 employees.
 - (1) List the employees with salary >10000
 - (2) List the employees whose name starts with "A". (8)

Or

- (b) (i) Write a C++ program to append the contents of a file. (8)
- (ii) Explain the functions
 - (1) seekg () (2)
 - (2) seekp () (2)
 - (3) tellg () (2)
 - (4) tellp () (2)