**CLASS XII**

**COMPUTER SCIENCE**

**ASSIGNMENT-CLASSES AND OBJECTS**

Q1)Define a class Shop in C++ with the description given below:

**private members**

name array of 40 characters

address array of 40 characters

type of item array of 3X20 characters

availqty array of 3 integers

totalqty array of 3 integers

**public members**

init() function to ask and store the values of address ,type of items , availqty & totalqty.

purchase() function to ask the qty purchased and type of item from

the user and updates the totalqty and avialqty accordingly

for example: if the type of items available in the shop are

“Cosmetic”,”Food Products” , ”Medicines” . And the shop

Keeper purchases the “Cosmetic” item then updates availqty and totalqty of the “Cosmetic” item.

display() function to display the details of the item in the following format :

Name : <SHOP NAME >

Address :< ADDRESS >

Items : < Type of Item 1> <Type of Item 2> <Type item 3>

Balance Stock :< avialqty> <availqty> <avialqty>

Q2)Define a class FLIGHT in C++ with following description:

Private Members:

• A data member Flight number of type integer

• A data member Destination of type string

• A data member Distance of type float

• A data member Fuel of type float

• A member function CALFUEL() to calculate the value of Fuel as per the

following criteria :

**Distance Fuel**

<=1000 500

more than 1000 and <=2000 1100

more than 2000 2200

Public Members:

•" A function FEEDINFO() to allow user to enter values for Flight Number,

Destination, Distance & call function CALFUEL() to calculate the quantity of Fuel

•" A function SHOWINFO() to allow user to view the content of all the data members

Q3) Write a menu driven program for following class-:

class student

{

int admno;

char name[20];

char subjectname[5][20];

int marks[5];

float percentage;

void calpercentage()

{

}

public:

void acceptdetails();//should call calpercentage()

void showdata();

};

Implement the above class as follows through a menu driven program:-

1. List of toppers in each subject
2. List of failures in each subject
3. Average marks in each subject
4. Count of students below average in each subject
5. Count of students above average in each subject

Q4). Assume the following definition of Class ..

class Book

{ int bookId;

char Name[20] ;

char author[20];

char publisher[20];

float price;

int noofcopies;

int noofcopiesissued;

};

Write a Menu driven Program

1. to create array of objects of following class into an array of objects
2. To display the record of book for a specific author
3. To display books whose all the copies have been issued
4. To delete a complete book based on Book Id
5. Sort the list of Books through bubble sort in ascending order of bookid.

Q5)Define a class **CLOTH** in C++ with following description:

**Private Members:**

• A data member Code of type string

• A data member Type of type string

• A data member Size of type integer

• A data member Material of type string

• A data member Price of type float

• A function Cal\_price() which calculates and assigns the value of GPrice as follows:

For the value of Material as “COTTON”:

**Type Price(Rs.)**

TROUSER 1500

SHIRT 1200

• For Material other than “COTTON” the above mentioned Price gets reduced by 25%.

**Public Members:**

•" A initialize function to assign initial values of Code, Type and Material with the word “NOT ASSIGNED” and Size and Price with 0.

• A function Enter () to input the values of the data members Code, Type, Size and Material and invoke the Cal\_Price () function.

• A function Show () which displays the content of all the data members for a CLOTH.

**Note: All questions to be done on computer and softcopy to be maintained for the same. Also all the questions to be done in Register.**