

# C++ Assignment-I

## CLASS AND OBJECT

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**Question 1** Define a class student with the following specification

**Private members** of class student

admno	integer
sname	20 character
eng, math, science	float
total	float
ctotal()	a function to calculate eng + math + science with float return type.

**Public member** function of class student

Takedata()	Function to accept values for admno, sname, eng, science and invoke ctotal() to calculate total.
Showdata()	Function to display all the data members on the screen.

**Question 2** Define a class batsman with the following specifications:

**Private members:**

bcode	4 digits code number
bname	20 characters
innings, notout, runs	integer type
batavg	it is calculated according to the formula $\text{batavg} = \text{runs} / (\text{innings} - \text{notout})$
calcavg()	Function to compute batavg

**Public members:**

readdata()	Function to accept value from bcode, name, innings, notout and invoke the function calcavg()
displaydata()	Function to display the data members on the screen.

**Question 3** Define a class TEST in C++ with following description:

**Private Members**

- TestCode of type integer
- Description of type string
- NoCandidate of type integer
- CenterReqd (number of centers required) of type integer
- A member function CALCNTR() to calculate and return the number of centers as  $(\text{NoCandidates} / 100 + 1)$

**Public Members**

- A function SCHEDULE() to allow user to enter values for TestCode, Description, NoCandidate & call function CALCNTR() to calculate the number of Centres
- A function DISPTEST() to allow user to view the content of all the data members

**Question 4** Define a class 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

<i>Distance</i>	<i>Fuel</i>
<=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

**Question 5** Define a class BOOK with the following specifications :

**Private members** of the class BOOK are  
 BOOK NO integer type  
 BOOKTITLE 20 characters  
 PRICE float (price per copy)  
 TOTAL\_COST() A function to calculate the total cost for N number of copies where N is passed to the function as argument.

**Public members** of the class BOOK are  
 INPUT() function to read BOOK\_NO. BOOKTITLE, PRICE  
 PURCHASE() function to ask the user to input the number of copies to be purchased. It invokes TOTAL\_COST() and prints the total cost to be paid by the user.

Note : You are also required to give detailed function definitions.

**Question 6** Define a class REPORT with the following specification:

**Private members :**  
 adno 4 digit admission number  
 name 20 characters  
 marks an array of 5 floating point values  
 average average marks obtained  
 GETAVG() a function to compute the average obtained in five subject

**Public members:**  
 READINFO() function to accept values for adno, name, marks. Invoke the function GETAVG()  
 DISPLAYINFO() function to display all data members of report on the screen.