QUESTION BANK
SUB: COMPUTER SCIENCE(083)

CHAPTER 4 INHERITANCE
4 MARKS QUESTIONS

1 Answer the questions (i) to (iv) based on the following code :

```
class CUSTOMER
{
int Cust_no; char
Cust_Name[20];
protected:
void Register(); public:
CUSTOMER();
void Status();
};
class SALESMAN
{
int Salesman_no; char
Salesman_Name[20];
protected: float Salary;
public:
SALESMAN();
void Enter(); void
Show();
};
class SHOP : private CUSTOMER , public SALESMAN
{
char Voucher_No[10];
char Sales_Date[8];
public: SHOP(); void
Sales_Entry();  void
Sales_Detail();
}
```

(i) Write the names of data members which are accessible from objects
belonging to class CUSTOMER.
(iI) Write the names of all the member functions which are accessible from objects belonging
to class SALESMAN.
(iii) Write the names of all the members which are accessible from member functions of class
    SHOP.
(iv) How many bytes will be required by an object belonging to SHOP?

3.Answer the questions (i) to (iv) based on the following:

```
class PUBLISHER
{
```

```cpp
char Pub[12]; double
Turnover; protected:
void Register(); public:
PUBLISHER(); void
Enter();
void Display();
};
class BRANCH
{
char CITY[20]; protected:
float Employees public:
BRANCH(); void
Haveit();
void Giveit();
};
class AUTHOR : private BRANCH , public PUBLISHER
{
int Acode; char
Aname[20];
float Amount;
public:
AUTHOR();
void Start();
void Show();
};
```

(i) Write the names of data members, which are accessible from objects belonging to class AUTHOR.

(ii) Write the names of all the member functions which are accessible from objects belonging to class BRANCH.

(iii) Write the names of all the members which are accessible from member functions of class AUTHOR.

(iv) How many bytes will be required by an object belonging to class AUTHOR?

4. Answer the questions (i) to (iv) based on the following code:

```cpp
class Dolls
 {
 char DCode[5];
protected:  float
Price ;  void
CalcPrice(float);
public:  Dolls( );  void
DInput( );
 void DShow( );
 };
class SoftDolls: public Dolls
{
 char SDName[20];
float Weight; public:
```

SoftDolls( );
void SDInput( );
void SDShow( );
};
class ElectronicDolls: public Dolls
{
 char EDName[20];
char BatteryType[10];
int Battieries; public:
 ElectronicDolls ( );
void EDInput( );
 void EDShow( );
};
(i)   Which type of Inheritance is shown in the above example?
(ii) How many bytes will be required by an object of the class ElectronicDolls?
(iii) Write name of all the data members accessible from member functions of the class SoftDolls.
(iv) Write name of all the member functions accessible by an object.

5 consider the following class declaration and answer the question below :
class university {
int noc;
protected; char
uname[25];
public:
university(); char
state[25];   void
enterdata();
void displaydata();
};
class college:public university{
int nod; char cname[25];
protected:
void affiliation();
public: college();
void enrol(int ,int);
void show();
};
class department:public college{
char dname[25];
int nof; public:
department(); void
display();
void input();
};
(i) Which class's constructor will be called first at the time of declaration of an object of
     class department?
(ii) How many bytes does an object belonging to class department require?
(iii)Name the member function(s), which are accessed from the object of class department.

(iv) Name the data member, which are accessible from the object of class college.

8 Answer the questions(i) to (iv) based on the following : class

```
cloth
{
char category[5];
char description[25];
protected: float
price; public: void
Entercloth( );
void dispcloth( );
};
class Design : protected cloth
{
char design[21]; protected:
float cost_of_cloth;
public: int
design_code;
Design( ); void
Enterdesign( );
void dispdesign( );
};
class costing : public cloth
{
float designfee;
float stiching; float
cal_cp( );
protected:
float costprice; float
sellprice; public:
void Entercost( ); void
dispcost( );
costing ( ) { };
};
```

(i) Write the names of data members which are accessible from objects belonging to class cloth.

(ii)Write the names of all the members which are accessible from objects belonging to class Design.

   (iii) Write the names of all the data members which are accessible from member functions of class costing.

(iv) How many bytes will be required by an object belonging to class Design?

9. Answer the questions(i) to (iv) based on the following : class

```
Regular
{
char SchoolCode[10]; public:
void InRegular( );
void OutRegular( );
};
class Distance
```

{
char StudyCentreCode[5];
public: void InDistance( );
void OutDistance( );
};
class Course : public Regular, private Distance
char Code[5]; float Fees; int Duration; public:
void InCourse( ); void OutCourse( );
};
(i) Which type of Inheritance is shown in the above example?
(ii) Write names of all the member functions accessible from Outcourse function of class Course.
(iii) Write name of all the members accessible through an object of the Class Course.
(iv) Is the function InRegular( ) accessible inside the function InDistance ( )?
Justify your answer.
10. Consider the following declarations and answer the questions given below:
class Mydata {
protected: int
data; public:
void Get_mydata(int); void
Manip_mydata(int); void
Show_mydata(int);
Mydata( );
~Mydata( );
};
class Personal_data
{
protected: int
data1; public:
void Get_personaldata(int); void
Show_personaldata(int);
Personal_data1( );
~Personal_data1( );
};
class Person: public Mydata, Personal_data
{
public:
void Show_person(void);
Person( );
~Person( );
};
i) How many bytes will be required by an object belonging to class Person? ii) Which type of inheritance is depicted in the above example? iii) List the data members that can be accessed by the member function Show_person( ). iv) What is the order of constructor execution at the time of creating an object of class Person?

11. Answer the questions (i) to (iv) based on the following: class
Book
{
int year_publication;
char title[25]; float
price; public: Book(
); void input_data( );
void output_data( );
};
class Tape
{
char comp_name[20]; protected:
char comp_addr[35];
public: Tape( ); void
read_data( );
void show_data( );
};
class Publication : private Book , public Tape
{
int no_copies;
public:
Publication( ); void
Pub_Entry( );
void Pub_Detail( );
};
(i)   Write the names of data members which are accessible from objects belonging to class
      Publication.
(ii) Write the names of all the member functions which are accessible from objects
      belonging to class Tape.
(iii) Write in which order the constructors will be invoked when an object of class Publication
      is created .
(iv) How many bytes will be required by an object belonging to class Publication?

14. Answer the questions (i) to (iv) based on the following code: class
vehicle
{
int wheels;
protected: int
passenger;
public: void
inputdata( );
void outputdata( );
};
class heavyvehicle : protected vehicle
{int diesel_petrol;
protected: int load;
public: void
readdata(int, int);

void writedata( );
};
class bus : private heavyvehicle
{
char make[20];
public: void
fetchdata( );
void displaydata( );
};
i) Name the base class and derived class of heavyvehicle class.
ii)Name the data member(s) that can be accessed from the function displaydata( ). iii) How
   many bytes will be required by an object of vehicle and heavyvehicle classes respectively?
iv) Is the member function outputdata( ) accessible to the objects of the class heavyvehicle?

15. Consider the following declarations and answer the questions given below: class
Animal
{ int leg:
protected:
int tail;
public:
void INPUT (int);
void OUT ( );
};
class wild : private Animal
{
int carniv;
protected: int
teeth; Public:
void INDATA (int, int) void
OUTDATA( );
};
class pet : public Animal
{
int herbiv; public:
void Display
(void);
};
(i)   Name the base class and derived class of the class wild.
(ii) Name the data member(s) that can be accessed from function Display ( ).
(iii) Name the member function(s), which can be accessed from the objects of class pet.
(iv) Is the member function OUT ( ) accessible by the objects of the class wild?

16. Answer the questions (i) to (iv) based on the following class declaration:
class Medicine {char category[10]; char Date_of_Manufacture[10]; char
Date_Of_Expiry[10]; protected:
char company[20];
public: int x,y;

Medicine( ); void Enter( ); void
Show( );}; class Tablet
:protected Medicine {protected:
char tablet_name[30]; char
volume_label[20]; void disprin(
); public: float price; Tablet( );
void enterdet( );
void showdet( );
};
class PainReliever : public Tablet
{int Dosage_units;
long int tab; char
effects[20];
protected:
I int use_within_Days; public
:
PainReliever( );
void enterpr( );
showpr( );};
(i)   How many bytes will be required by an object of class Drug and an object of classPainReliever
      respectively.
(ii) Write names of all the data members which are accessible from the object of classPainReliever.
(iii) Write names of all member functions which are accessible from objects of class PianReliever.
(iv) Write the names of all the data members which are accessible from the functionsenterpr().

18. Answer the questions (i) to (iv) based on following code: class
World
{int H; protected
int s; public:
void INPUT(int);
void OUTPUT(
);};
class Country : private World
{int T; protected: int U;
public : void INDATA(int,
int); void OUTDATA();};
class State : Public Country
{int M; public
:
void DISPLAY(void);};
(i)   Name the base class and derived class of the class Country.
(ii) Name the data member that can be accessed from function DISPLAY( )
(iii) Name the member functions, which can be accessed from the objects of class State.
(iv) Is the member function OUTPUT() accessible by the objects of the class Country ?

19. Answer the questions (i) to (v) based on the following code : class
Employee
{int id;

protected: char
name[20]; char
doj[20]; public
:
Employee( );
~Employee( );
void get( ); void
show( );};
class Daily_wager : protected Employee
{
int wphour; protected
:
int nofhworked; public
:
void getd( );
void showd( );
};
class Payment : private Daily_wager
{char date[10];
protected : int
amount;
public :
Payment( );
~Payment( ); void
show( );};

(i) Name the member functions, which are accessible by the objects of class Payment.
(ii) From the following, Identify the member function(s) that can be called directly from the object of class Daily_wager class show( ), getd( ), get( )
(iii) Find the memory size of object of class Daily_wager.
(iv) Is the constructors of class Employee will copied in class Payment Due to Inheritance?

20. Answer the questions (i) to (iii) based on the following code:
class toys {char Code; char Manufacturer [10]; public: toys( );
void Read_toy_details ( ); void
Disp_toy_details( );}; class
electronic : public toys
{int no_of_types; float
cost_of_toy; public: void
Read_elect_details ( ); void
Disp_elect_details ( );}; class
infants : private electronic
{int no_of_buyers; char
delivery date[10]; public:
void Read_infant_details ( );
void Disp_jnfant_details( );
};
void main ( )
{ infants MyToy;}
(a) Mention the member names which are accessible by MyToy declared in main ( ) function.

(b) What is the size of MyToy in bytes?

(c) Mention the names of functions accessible from the member function Read_infant_details () of class printer.

(d) Which type of inheritance shown in the above code?