

QUESTION BANK

SUB: COMPUTER SCIENCE(083)

CHAPTER 5 Data File Handling

1 Mark Questions

1. Observe the program segment carefully and answer the question that follows:

```
class item {int
item_no; char
item_name[20];
public: void
enterDetail( ); void
showDetail( );
int getItem_no(){ return item_no;}
};
void modify(item x, int y )
{fstream File;
File.open( "item.dat", ios::binary | ios::in | ios::out ); item
i;
int recordsRead = 0, found = 0;
while(!found && File.read((char*) &i , sizeof (i)))
{recordsRead++;
if(i . getItem_no( ) = = y )
{_____//Missing statement
File.write((char*) &x , sizeof (x));
found = 1;}} if(! found)
cout<<"Record for modification does not exist" ;
File.close() ;}
```

If the function modify() is supposed to modify a record in the file " item.dat ",which item_no is y, with the values of item x passed as argument, write the appropriate statement for the missing statement using seekp() or seekg(), whichever is needed, in the above code that would write the modified record at its proper place.

2 Observe the program segment carefully and answer the question that follows:

```
class member {int
member_no; char
member_name[20];
public:
void enterDetail( ); void
showDetail( );
int getMember_no( ){ return member_no;}};
void update(member NEW )
{fstream File;
File.open( "member.dat", ios::binary | ios::in | ios::out ); member
i;
while(File .read((char*) &i , sizeof (i)))
```

```

{if(NEW . getMember_no( ) == i . getMember_no( )
{_____//Missing statement
File.write((char*) &NEW , sizeof (NEW));}
File.close() ;}

```

If the function update() is supposed to modify the member_name field of arecord in the file “ member.dat” with the values of member NEW passed asargument, write the appropriate statement for the missing statement using seekp() or seekg(), whichever is needed, in the above code that would write themodified record at its proper place.

3. Observe the program segment carefully and answer the question that follows:

```

class item {int
item_no; char
item_name[20];
public: void
enterDetails( ); void
showDetail( );
int getItem_no( ){ return item_no;}; void
modify(item x )
{fstream File;
File.open( “item.dat”, _____ ) ; //parameter missing
item i; while(File .read((char*) & i , sizeof (i))) {if(x . getItem_no(
) == i . getItem_no( )
{File.seekp(File.tellg( ) – sizeof(i));
File.write((char*) &x , sizeof (x));} else
File.write((char*) &i , sizeof (i)); }
File.close() ;}

```

If the function modify() modifies a record in the file “ item.dat “ with the valuesof item x passed as argument, write the appropriate parameter for the missingparameter in the above code, so as to modify record at its proper place.

4. Observe the program segment carefully and answer the question that follows:

```

class member {int member_no; char member_name[20]; public:
void enterDetails( ); void
showDetail( );
int getMember_no( ){ return member_no;};
void update(member NEW )
{fstream File;
File.open( “member.dat”, ios::binary|ios::in|ios::out) ; member
i;
while(File .read((char*) & i , sizeof (i)))
{if(NEW . getMember_no( ) == i . getMember_no( )
{File.seekp( _____ , ios::cur ) //Paremeter Missing
File.write((char*) &NEW , sizeof (NEW));}
File.close() ;}

```

If the function update() is supposed to modify a record in the file “ member.dat”with the values of member NEW passed as argument, write the appropriateparameter for the missing parameter in the above code, so as to modify record atits proper place.

5. Observe the program segment given below carefully, and answer the question that follows:

```

class Applicant
{ long Aid; //Applicant's Id char
Name[20]; //Applicant's Name
float Score; //Applicant's Score
public: void Enroll(); void Disp();
void MarksScore(); //Function to change Score
long R_Aid() {return Aid;}; void
ScoreUpdate(long Id)
{fstream File;
File.open("APPLI.DAT",ios::binary|ios::in|ios::out);
Applicant A; int
Record=0,Found=0;
while (!Found&&File.read((char*)&C, sizeof(c)))
{ if (Id==A.R_Aid())
{ cout<<"Enter new Score..."; cin>>A.MarksScore();
_____ //statement 1
_____ //statement 2
Found = 1;}
Record++;}
if(Found==1) cout<<"Record Updated";
File.close();}

```

Write the Statement1 to position the File Pointer at the beginning of theRecord for which the Applicant's Id matches with the argument passed,and Statement2 to write the updated Record at that position.

6. Observe the program segment carefully and answer the question that follows:

```

class student {int student_no; char student_name[20];
int mark; public:
void enterDetail( ); void
showDetail( );
void change_mark( ); //Function to change the mark int
getStudent_no( ){ return student_no;};
void modify( int y )
{fstream File;
File.open( "student.dat", ios::binary|ios::in|ios::out) ; student
i;
int recordsRead = 0, found = 0;
while(!found && File .read((char*) & i , sizeof (i)))
{recordsRead++;
if(i . getStudent_no( ) = = y )
{i . change_mark( );
_____ //Missing statement 1
_____ //Missing statement 2 found
= 1;}}
if( found = = 1) cout<<"Record
modified" ; File.close() ;}

```

If the function modify() is supposed to change the mark of a student havingstudent_no y in the file "student.dat", write the missing statements to modify thestudent record.

7. Observe the program segment carefully and answer the question that follows:

```
class item {int
item_no; char
item_name[20];
public: void
enterDetail( ); void
showDetail( );
int getItem_no( ){ return item_no;}; void
modify(item x )
{fstream File;
File.open( "item.dat", ios::binary|ios::in|ios::out ); item
i;
while(File .read((char*) & i , sizeof (i))//Statement 1
{if(x . getItem_no( ) = i . getItem_no( ))
{File.seekp(File.tellg( ) – sizeof(i));
File.write((char*) &x , sizeof (x));}
}
File.close() ;}
```

If the function modify() modifies a record in the file “ item.dat” with the values of item x passed as argument, rewrite statement 1 in the above code using eof() , so as to modify record at its proper place.

8.. Observe the program segment given below carefully and fill the blanks marked as Statement 1 and Statement 2 using seekp() and seekg() functions for performing the required task.

```
#include <fstream.h> class
Item
{ int lno; char Item[20]; public:
//Function to search and display the content from a particular record number void
Search(int );
//Function to modify the content of a particular record number void
Modify(int);};
void Item::Search(int RecNo)
{ fstream File;
File.open("STOCK.DAT",ios::binary| ios::in);
_____ //Statement 1
File.read((char*)this,sizeof(Item));
cout<<lno<<"=="<<Item<<endl;
File.close();}
void Item::Modify(int RecNo)
{fstream File;
File.open("STOCK.DAT",ios::binary| ios::in| ios::out);
cout>>lno; cin.getline(Item,20);
_____ //Statement 2
File.write((char*)this,sizeof(Item));
File.close();}
```

9. Observe the program segment given below carefully and fill the blanks marked as Statement 1 and Statement 2 using seekg() and tellg() functions for performing the required task.

```
#include <fstream.h>
class Employee {int
Eno;char Ename[20];
public:
//Function to count the total number of records
int Countrec();}; int Item::Countrec()
{ fstream File;
File.open("EMP.DAT",ios::binary|ios::in);
_____ //Statement 1- To take the file pointer to
//the end of file.
int Bytes =
_____ //Statement 2-To return total number of bytes from the beginning of
file to the file pointer.
int Count = Bytes / sizeof(Item); File.close();
return Count;}
```

10. Observe the program segment given below carefully and fill the blanks marked as Statement 1 and Statement 2 using seekg() and tellg() functions for performing the required task.

```
class Library {long Ano; char
Title[20]; int Qty; public: void
Enter(int); void Display(); void
Buy(int Tqty) {Qty+=Tqty;} long
GetAno( ) { return Ano;}}; void
BuyBook(long BAno. Int BQty)
{Fstream File;
File.open("STOCK.DAT",ios::binary|ios::in|ios::out);
int Position=-1; Library L;
while(Position!=-1&&File.read((char*)&L, sizeof(L))
{if(L.GetAno()==BAno)
{L.Buy(BQty);
Position=File.tellg()-sizeof(L);
//Line1: To place the file pointer to the required position
_____};
//Line2: To write the object L on to the binary file
_____};}
if(position!=-1)
cout<<"No updation done as required Ano not found";
File.close(); }
```

11. A file named as "STUDENT.DAT" contains the student records, i.e. objects of class student. Write the command to open the file to update a student record. (Use suitable stream class and file mode(s)).

12. A file named as "EMPLOYEE.DAT" contains the employee records, i.e. objects of class employee. Assuming that the file is just opened through the object FILEof fstream class, in the

required file mode, write the command to position the putpointer to point to fifth record from the last record.

13. A file named as "EMPLOYEE.DAT" contains the student records, i.e. objects of class employee. Assuming that the file is just opened through the object FILE ofstream class, in the required File mode, write the command to position the getpointer to point to eighth record from the beginning.

2 MARKS QUESTION

1. Write a function in C++ to print the count of the word the as an independent word in a text file STORY.TXT.

For example, if the content of the file STORY.TXT is There was a monkey in the zoo.

The monkey was very naughty.

Then the output of the program should be 2.

2. Assume a text file "coordinate.txt" is already created. Using this file create a C++ function to count the number of words having first character capital.

Example:

Do less Thinking and pay more attention to your heart. Do Less Acquiring and pay more Attention to what you already have. Do Less Complaining and pay more Attention to giving. Do Less criticizing and pay more Attention to Complementing. Do less talking and pay more attention to SILENCE. Output will be : Total words are 16

3. Write a function in C++ to count the number of lines present in a text file "STORY.TXT".

4. Write a function in C++ to count the number of alphabets present in a text file "NOTES.TXT".

5. Write a function in C++ to write the characters entered through the keyboard into the file "myfile.txt", until a '#' character is entered.

6.. Assume a text file "Test.TXT" is already created. Using this file, create a function to create three files "LOWER.TXT" which contains all the lowercase vowels and "UPPER.TXT" which contains all the uppercase vowels and "DIGIT.TXT" which contains all digits.

7. Assume that a text file named text1.txt already contains some text written into it, write a function named vowelwords(), that reads the file text1.txt and create a new file named text2.txt, which shall contain only those words from the file text1.txt which don't start with an uppercase vowel (i.e., with 'A', 'E', 'I', 'O', 'U'). for example if the file text1.txt contains:

Take One Apple And one glass milk daily.

Then the file text2.txt shall contain :

Take one glass milk daily.

7. Assume a text file "Test.TXT" is already created. Using this file, create a function to create three files "LOWER.TXT" which contains all the lowercase vowels and "UPPER.TXT" which contains all the uppercase vowels and "DIGIT.TXT" which contains all digits.

8. Write a function in C++ to calculate the average word size in a text file "Report.txt", each word is separated by single space or full stop.

9. Create a function FileLowerShow() in c++ which take file name(text files)as a argument and display its all data into lower case.

3 Marks Questions

1. Given a binary file PHONE.DAT, containing records of the following structure type

```
class Phonlist
{
char Name[20];
char Address[30];
char AreaCode[5];
char PhoneNo[15];
public: void
Register(); Void
Show();
int CheckCode(char AC[])
{
return strcmp(AreaCode,AC);
}
};
```

Write a function TRANSFER () in C++, that would copy all those records which are having AreaCode as “DEL” from PHONE.DAT to PHONBACK.DAT.

2. Given a binary file TELEPHON.DAT, containing records of the following class Directory:

```
class Directory
{
char Name[20];
char Address[30];
char AreaCode[5];
char Phone_No[15];
public:
void Register();
void Show();
int CheckCode(char AC[])
{
return strcmp(AreaCode,AC[]);
}
};
```

3 Write a function COPYABC in C++ that would copy only those records having AreaCode as “123” from TELEPHON.DAT to TELEBACK.DAT.

4. Given a binary file SPORTS.DAT, containing records of the following structure type : struct Sports

```
{
char Event[20];
char Participant[10][30];
```

```
};
```

Write a function in C++ that would read contents from the file SPORTS.DAT and creates a file named ATHLETIC.DAT copying only those records from SPORTS.DAT where the event name is "Athletics".

5. Write a function in C++ to search for a BookNo from a binary file "BOOK.DAT", assuming the binary file is containing the objects of the following class.

```
class BOOK
{
int Bno; char
Title[20];
public:
int RBno(){return Bno;} void
Enter(){cin>>Bno;gets(Title);} void
Display(){cout<<Bno<<Title<<endl;}
};
```

6. Write a function in C++ to add new objects at the bottom of a binary file "STUDENT.DAT", assuming the binary file is containing the objects of the following class.

```
class STUD
{
int Rno; char
Name[20];
public:
void Enter()
{
cin>>Rno;gets(Name);
}
void Display(){cout<<Rno<<Name<<endl;}
};
```

7. Write a function in C++ to read and display the detail of all the members whose membership type is 'L' or 'M' from a binary file "CLUB.DAT". Assuming the binary file "CLUB.DAT" is containing objects of class CLUB, which is defined as follows:

```
class CLUB
{
int Mno.
char Mname[20]; char Type; //Member Type: L Life Member M
Monthly member G Guest public:
void Register( );
void Display( );
char whatType( ) { return type; } };
```

8. Assuming the class DRINKS defined below, write functions in C++ to perform the following : (i) write the objects of DRINKS to binary file. (ii) Read the objects of DRINKS from binary file and display them on screen when Dname has value "Pepsi".

```

class DRINKS
{ int DCode; char
DName[13]; int Dsize; //
size in litres. float
Dprice;
}
public: void
getdrinks( )
{ cin>>DCode>>DName>>Dsize>>Dprice;}
void showdrinks( )
{ cout<< DCode<<DName<,Dsize<,Dprice;}
char *getname() { return Dname;}
};

```

9. Write a function in C++ to add a new object in a binary file "Customer.dat". assume the binary file is containing the objects of the following class:

```

class customer
{
int CNo; Char CName[21];
public: void Enterdata( )
{cin>>CNo.;gets(CName);}
void dispdata( )
{ cout<<CNo.<<CName;}
};

```

10. Assuming the class DRINKS defined below, write functions in C++ to perform the following :

(i)Write the objects of DRINKS to binary file.

(ii) Read the objects of DRINKS from binary file and display them on screen when DCode has value 1234.

```

class DRINKS { int DCode;
char DName[13]; int
Dsize; // size in litres.
float Dprice;
}
public:
void getdrinks( )
{ cin>>DCode>>DName>>Dsize>>Dprice;}
void showdrinks( )
{ cout<< DCode<<DName<,Dsize<,Dprice;}
int getcode() {
return Dcode;}
};

```