Unit- 6 Hashing and File Organization Question Bank

1	What is a hash table? a) A structure that maps values to keys b) A structure that maps keys to values c) A structure used for storage d) A structure used to implement stack and queue Answer: b)
2	Files are logically partitioned into storage units of fixed-length known as ASectors BTracks CSegments DBlocks Ans D
3)	An organized logical sequence of records is called AFile BOrganization CScrubbing DSequencing Ans A

4)	The file organization in which records are stored in a logical order is known to be A Clustered file organization B Hashing file organization C Sequential file organization D Heap file organization Ans C
5)	In hashing file organization, a hash function is calculated on some AAttribute of each record BAttribute of Method CAttribute of relation DAttribute of sequence Ans A
6)	---------- is a mechanism which helps in organizing the data or records in a file. A File organization B Data Structure C Operating System D Memory Organization Ans A

7)	In sequential file organization records are arranged----------. ASequentially BRandomly CRelatively DParallel Ans A
8)	In sequential file organization record can be inserted only at ----------. ARandom position BBeginning CEnd of the file DNone of the above. Ans C
9	Sequential file organization will be expensive for ALarge databases BSmall databases CBoth A and B DNone of the above. Ans A
10	ofstream class signifies AThe output file stream BCreation of files for writing information CBoth A and B

	DNone of the above. Ans C
11	fstream class signifies A Writing information to files B Reading information from files C Both A and B D None of the above. Ans C
12	Airline reservation systems and inventory control system are the examples of …….. System. A Pile B Sequential file C Indexed sequential file D Indexed file. Ans D
13	Direct access file organization is efficient for ASmall database BLarge database CBoth A & B DNone of the above Ans B

14	To move the cursor to the current position following file position indicator is used A Seek_set B Seek_cur C Fseek D Both A & B A Ans B
15	If you create a file with the same name as an existing file, you will be prompted to rename your new file a) True b) False Ans B
16	eof( ) is the function used for a)asserting no errors in a file b) appending data to a file c) counting the amount of data in a file d)checking for end of file Ans D

17	Which of the following true about FILE *fp A)FILE is a structure and fp is a pointer to the structure of FILE type B)FILE is a buffered stream c) FILE is a keyword in C for representing files and fp is a variable of FILE type d)FILE is a streaM Answer a
18	Which is correct syntax ? a). myfile:open ("example.bin", ios::out); b).myfile.open ("example.bin", ios::out); c). myfile::open ("example.bin", ios::out); d). myfile.open ("example.bin", ios:out) Answer b

19	Which is correct syntax for, position n bytes back from end of fileObject ?
	a). FileObject.seekg(ios::end, n);
	b). FileObject.seekg(n, ios:end); c).FileObject.seekg(n, ios::end);
	d). FileObject.seekg(ios:end, n);
	Ans- c

20	. When fopen() is not able to open a file, it returns a). EOF b). Null c). Runtime error d). Compiler dependent Ans- b

21	By default, all the files are opened in which of the following mode? a). Binary Mode b).Text Mode c).Sequential Mode d). Both A and B Ans- b
22	Which header file is required to use file I/O operations? a) <ifstream> b) <ostream> c) <fstream> d) <iostream> Ans- c
23	What is the use of ios::trunc mode? a) To open a file in input mode b) To open a file in output mode c) To truncate an existing file to half d) To truncate an existing file to zero

	Ansd
24	Which of the following is not used to seek file pointer? a) ios::set b) ios::end c) ios::cur d) ios::beg Ans: a
25	Which function is used to reposition the file pointer? a) moveg() b) seekg() c) changep() d) go_p() aNS:b
26	How to get position to the nth byte of fileObject ? 1. fileObject.seekg('filename',n); 2. fileObject.seekg(n, 'filename'); 3. fileObject.seekg(n);

	4. fileObject.seekg(n, ios::app); Ans:3

27	Analyze the following code and choose the relevant option out of the following.
	#include<fstream.h>
	#include<iostream>
	#include<conio.h>;
	using namespace std;
	main()
	{
	int rollno;
	char name[20];
	int marks;
	ofstream out_file(“stud.txt”;);
	if(!out_file)
	{
	cerr<<"file cannot open correctly";
	}
	cout<<"enter student details\n";
	cout<<"enter roll no";
	cin>>rollno;
	cout<<"enter name:";

	cin>>name;
	cout<<"enter marks:";
	cin>>marks;
	
	out_file<<rollno<<endl;
	out_file<<name<<endl;
	out_file<<marks<<endl;
	getch();
	return 0;
	}
	
	a) file named stud is opened in write mode
	b) details entered by the user
	c) details copied to a file associated with
	d) all of the above
	Ans:d

28	Analyze and choose an appropriate option from the following given options. #include <iostream> #include <fstream> #include <string> #include<conio.h>

```
using namespace std;

main ()

{

  string line;

  ifstream abc ("text.txt");

if (abc_is.open())

{

while ( abc.good() )

      {

       getline (abc,line);

       cout << line << endl;

      }

        abc.close();

   }

  else

    cout << "Unable to open file";

getch();

}
```

a.)**compile time error**

b) run time error

	c)unable to open file d)some file operation will be done Ans:a

29	Analyze and choose an appropriate option from the following given options.
	#include <fstream.h>
	#include <iostream.h>
	#include<conio.h>
	int main()
	{
	char data[25];
	ofstream out;
	out.open("text.txt");
	cout<<"\n eneter the text"<<endl;
	cin.getline(data,25);
	out<<data;
	out.close();
	out.open("text.txt", ios::app);
	cout<<"again eneter the text"<<endl;

```
cin.getline(data,25);
out<<data;
out.close();
ifstream in;
in.open("text.txt");
cout<<"Contents of the files are \n";
    while(in.eof()==0)
        {
            in>>data;
            cout<<data;
        }
            in.close();
            getch();
}
```

a) firstly a file is opened for writing and after writing it is closed

then same file is opened for appending and then file is closed and then modified file data is read on console.

b) firstly a file is opened for reading and after writing it is closed

then same file is opened for appending and then file is closed and then modified file data is read on console.

	c) firstly a file is opened for writing and after writing it is closed then same file is opened for ate and then file is closed and then modified file data is read on file. d) None of the above Ans a
30	How to find the position at end of fileObject ? 1. **fileObject.seekg(0, ios::end);** 2. fileObject.seekg(0, ios::end); 3. fileObject.seekg(0, ios::end); 4. fileObject.seekg(0, ios::end); Ans 1
31	The technique of linear probing for collision can lead to A Clustering B Radix sort C Efficient storage utilization D Overflow Ans : A
32	A hash search is a search in which in the key, through an algorithmic function, determines _____. A The location of the data. B Data value C Both of A & B D None of the above

	Answer A
33	The set of keys from the list that hash to the same location called A Synonyms B Antonyms C Probe D None of the above Answer A
34	The address produced by the hashing algorithm is known as A Home address B List address C Prime area D All of the above Answer A
35	Which of the following is not hashing technique? A Modulo division B Digit extraction C Pseudorandom generation D Linear Probing Answer D

36	The key is address without any algorithmic manipulation called A Subtraction method B Direct method C Digit-Extraction method D Modulo-Division method Answer B
37	Selected digits are extracted from the key and used as the address called A Digit Extraction method B Modulo division method C Modulo-digit extraction method D None of the above Answer A
38	Lets Module-Division hash, Bryan Devaux's employee number, 121267 with first prime number after 300. the location is, A 2

	B 4 C 3 D 7 Answer A
39	In midsquare hashing method A Select a any part of the key, square it. B The key is squared and the address selected from middle of the squared number C Both A & B D Only B Answer C
40	What is true about load factor for hashing? A Measure of how much loaded a hash table i sat a certain time. B Ratio of occupied cells and number of total cells in the hash table. C When load factor falls to 1/2 then the size of the hash table is double.

	D All of the above Answer D
41	What is Bloom filter? A Hash table of k different entries where each entry is mapped to the table using a different hash function. B Hash table of k different entries where each entry is mapped to the table using a same hash function. C It is a scheme to handle collision using the best approach of open addressing and separate chaining. D None of the above Answer A
42	What is Coalesced hashing? A Hash table of k different entries where each entry is mapped to the table using a different hash function. B Hash table of k different entries where each entry is mapped to the table using a same hash function. C It is a scheme to handle collision using the best approach of open addressing and separate chaining. D None of the above

	Answer C
43	Requirement of the additional data structure is the drawback of _____. A Linear Probing B Quadratic Probing C Double hashing D Chaining Answer D
44	In following collision resolution technique the key causing collision is placed at first vacant position _____. A Linear Probing B Quadratic Probing C Double hashing D Chaining Answer A
45	Double hashing method that produces different collision paths for different keys called _____ . A Linear Probe B Quadratic Probe C Key offset D None of the above Answer C

46	Characteristics of good hash functions A Less & quick computing B Minimum collision C Even distribution of keys D All of the above Answer D
47	Rehashing is required when _____ . A Table is completely full B with quadratic probing when table is filled half C Insertion fails due to overflowing D All of the above Answer D
48	While applying the double hashing technique the h(key)=M-(key%M). The M must be preferably a _____ . A Random number B Prime number C Sqaure number D Large number Answer B
49	Rotation method is useful when _____ . A Keys are assigned serially B Keys are assigned randomly C Both of the above D None of the above

	Answer A
50	A major disadvantage to open addressing is that _____. A each collision resolution increases the probability of future collisions. B Clustering C Both of the above D None of the above Answer C
52	In rehashing following statements are true. I. Transfering the content from old hash table to new hash table is required. II. Space gets doubled. A Only I B Only II C Both I & II D Neither I or II Answer C
53	The advantage of chained hash table over open addressing is _____. A Space required is less. B Removal or deletion operation is simple. C Worst case complexity of search operation is less D None of the above Answer B

54	Hashing process if used for disk files is classified as A preserving hashing B external hashing C internal hashing D reversal hashing Answer B
56	Folding is a method of A index function for triangulation of matrix B A hash function C chaining D None if these Answer B
57	Use of pointers is avoided in _____ hashing technique. I. Double hashing II. Chaining A Only I B Only II C Both I & II D Neither I or II Answer A
58	Using the module-division method, stores the key shown below in an array with 11 elements. How many collision occured? 224, 137, 214, 140, 241, 162, 144, 199, 234. A 1 B 2

	C 3 D 4 Answer C
59	Using chaining without replacement method, stores the key shown below in an array with 11 elements. How many links need to manage? 224, 137, 214, 140, 241, 162, 144, 199, 234. A 1 B 2 C 3 D 4 Answer C
60	Using chaining with replacement method, stores the key shown below in an array with 11 elements. How many links need to manage? 224, 137, 214, 140, 241, 162, 144, 199, 234, 145. A 1 B 2 C 3 D 4 Answer D

61	Using linear probing without replacement method, stores the key shown below in an array with 11 elements. How many collisions occurred? 224, 137, 214, 140, 241, 162, 144, 199, 234. A 1 B 2 C 3 D 4 Answer D
62	Consider a hash table with size 11. if there are 10 distinct identifiers in the program. The loading factor will be _____ . A 0.2 B 0.19 C 0.90 D 1 Answer C
63	Calculate the address for social security number 123456789 where table size is 999 using folding (Shift & boundary=3) method. A 368 B 764 C 456 D 99 Answer B

64	A hash table can store a maximum of 10 records. Currently there are record in the location 1, 3, 4,7,8,9,10. The probability of new record is going on location 2, with hash function resolving collision by linear probing is _____. A 0.6 B 0.1 C 0.2 D 0.5 Answer A
65	Calculate the address for the key 166702 using ke offset method for 2 probes with table sise 307, consider old address 001. A 166 B 047 C 132 D 219 Answer A
66	Calculate the address for the key 572556 using ke offset method for 2 probes with table sise 307, consider old address 001. A 166 B 047 C 132 D 219 Answer B

67	Calculate the address for the key 067234 using ke offset method for 2 probes with table sise 307, consider old address 001. A 166 B 047 C 132 D 219 Answer C
68	What will be the position of the number 3112 in a hash tables, when the mid square method is applied? (Table size is 1000) A 845 B 121 C 783 D 786 Answer A