

# LIST OF PRACTICALS FOR THE SESSION 2017-18

## COMPUTER SCIENCE

### CLASS-XII

1. Write a program to overload a function Simple Interest, that is capable to print simple interest for all signatures of the function.

2. Define a class outfit in C++ with the following description

**Private :**

OCode	of type string
OType	of type string
OSize	of type string
OFabric	of type string
Price	of type float

A function InitPrice( ) which calculates and assign the value of OPrice as follows:

For the value of OFabric as "DENIM"

<u>Type</u>	<u>Price</u>
TROUSER	1500
JACKET	2500

For the material other than "DENIM" the above mentioned Price gets reduced by 25%.

**Public:**

A function Input() to input the values of the data members OCode, OType, OSize and OFabric and invoke the function Init( ).

A Display function that display the content of all the data members for the Outfit.

3. Create a class PERSON with the following specification.

**Private:** Data members: name- character string, ph long.

**Public:** A constructor that initializes the name as 'NULL' and phone number as 0.

Getdata() – to get all values from user.

Putdata()- To display all data .

A destructor to destruct all construction..

Given that 'person class above wirte the declaration of class Spouse that inherits from class Person and does the following.

- (i) It has an extra data member – spousename.
- (ii) Redefine getdata and Putdata function.

Now create another class Children that inherits from spouse and does the following:

- (i) It has an extra data member childname.
- (ii) Redefine getdata and Putdata function.

Now create objects of all three classes and call Getdata() and Putdata() .

4. Write a program to count total number of vowels in a text file stored in disk.

5. Write a program to count total number of words in a text file stored in disk.
6. Write a program to perform Search operation in a binary file stored in disk (Using Class of Student)
7. Write a program to perform Delete operation from a binary file stored in disk (Using Class of Student)
8. Write a program to perform Insertion of a record in a binary file stored in disk (Using Class of Student)
9. Write a program to Modify a record in a binary file stored in disk (Using Class of Student)
10. Write a program to perform Linear Search in an array .(Using functions)
11. Write a program to perform Binary Search in an array(Using function).
12. Write a program to insert an element at a particular location in an array.
13. Write a program to delete an element from an array.
14. Write a program to perform Selection Sort to an array.
15. Write a program to implement Insertion Sort to an array.
16. Write a program to merge two arrays which are in ascending order, to give resultant in ascending/descending order.
17. Implementation of stack to perform Insert, delete and display operation array for storing marks of students.(Static initialization)
18. Implementation of Stack to perform Insert, delete and display operation using linked list to store salary of employees(Dynamic Initialization).
19. Implementation of Queue to perform Insert, delete and display operation using array for storing marks of students.(Static Initialization)
20. Implementation of Queue to perform Insert, delete and display operation using Linked list to store salary of employees.(Dynamic Initialization).
21. Implementation of Circular array to perform Insert, delete and display operation to store marks of students.

22. Consider the following tables **GAMES** and **PLAYER**. Write SQL commands for the statements (i) to (iv) and give outputs for SQL queries (v) to (viii)

**GAMES**

GCode	GameName	Number	PrizeMoney	Date
101	CaromBoard	2	5000	23-jan-2004
102	Badminton	2	12000	12-dec-2003
103	TableTennis	4	8000	14-feb-2004
104	Chess	2	9000	01-jan-2004
105	LawnTennis	4	25000	19-mar-2004

**PLAYER**

PCode	Name	GCode
1	Arjun	101
2	Ravi	105
3	Jignesh	101
4	Nihir	103
5	Sohil	104

- I. To display the name of players who plays CaromBoard.
- II. To display details of those game which are having PrizeMoney more than 8000.
- III. To display the details of those games whose name starts from character 'B'.
- IV. To display the details of those games which start after 01-jan -2004.
- V. Select COUNT(DISTINCT number) from games;
- VI. Select MAX(date) , MIN(date) from games;
- VII. Select AVG(PrizeMoney) from games Group by Number Having count(GCode) > 2;
- VIII. Select GameName from games Where date BETWEEN '10-Jan-2004' AND '20-Feb-2004';

23. Consider the following tables **EMPLOYEES** and **EMPSALARY**. Write SQL commands for the statements (i) to (iv) and give outputs for SQL queries (v) to (viii)

**EMPLOYEES**

EMPID	FNAME	LNAME	ADDRESS	CITY
010	Akash	Kumar	Malviya Nagar	Jaipur
105	Ajit	Singh	Delhi Road	Agra
152	Mohit	Nayak	Bandra	Mumbai
215	Deepak	Narwal	Holy Palace	Mumbai
225	Aman	Soni	Palwal	Haryana

**EMPSALARY**

EMPID	SALARY	BENEFITS	DESIGNATION
010	15000	2000	Manager
105	12000	1500	Manager
152	8000	800	Salesman
215	10000	1000	Clerk
225	16000	2000	Manager

- (i) To display Fname, Lname, Address and City of all employees living in Mumbai from the table EMPLOYEES.
- (ii) To display the content of EMPLOYEES table in descending order of Fname.
- (iii) To display the Fname, Lname and Total Salary of all Managers from the Table EMPLOYEES and EMPSALARY, where Total Salary is calculated as Salary + Benefits.
- (iv) To display the Maximum Salary among Managers and Clerks from the table EMPSALARY
- (v) Select FName, Salary from EMPLOYEES, EMPSALARY where DESIGNATION='Salesman' AND EMPLOYEES.EMPID= EMPSALARY.EMPID
- (vi) SELECT Count (Distinct Designation) from EMPSALARY
- (vii) SELECT designation, SUM (Salary) from EMPSALARY Group by Designation Having count (\*) >2;
- (viii) Select Sum (Benefits) from EMPLOYEES where DESIGNATION IN('clerk', 'manager');