

## 2BCA6 - Computer Lab-2

L	T	P	C	Theory	Internal	Practical	Total Marks
Credits/Hours							
-	-	+0/2	+0/2	0	20	80	100

### Practical List on DBMS

1. Draw an ER diagram to University Database.
2. Draw an ER diagram to Library management System.
3. Create a Library management Schema/ database and search anomalies in it.
4. Assume a video library maintains a database of movies rented out. Without any normalization, all information is stored in one table as shown below.
  - a. Normalize the following Schema with given Constraints.
  - b. books(accessionno, isbn, title, author, publisher)
  - c. users(userid, name, deptid, deptname)
  - d. accessionno → isbn
  - e. isbn → title
  - f. isbn → publisher
  - g. isbn → title
  - h. userid → name,
  - i. userid → deptid
  - j. deptid → department
5. Compare 3NF and BCNF with appropriate example.
6. Give exercise on DDL and DML .
7. Create a database named “school.mdb” and perform the following tasks using MS Access or My SQL
8. Create a table named “studentinfo” having following table structure.

Field Name	Data Type	Structure
Class	Number	
Section	Text	
Roll No.	Number	
Name	Text	40 Characters Long
Status	LookUp Wizard	Two Value: Senior and Junior
Photo	OLE Object	Photos of Student
DOB	Date/Time	Date of Birth Of students
Remarks	Memo	

9. Fill atleast 5 records.  
 Prepare a query to display all records and Name should be in ascending order.  
 Prepare a query named “senior” to display records including fields name, class, sec, rollno, status, photo and value of “status” field must be senior.  
 Prepare a form of above query “senior”.  
 Prepare a report of all the fields of above table.
10. Create a database named “library.mdb” and perform the following tasks:
11. Create a table named “Book” having following structure:

Field Name	Data Type
Bookid	Text
BName	Text
WName	Text
PYear	Date/Time
PName	Text
Price	Currency

Add at least 5 records.

Prepare a query to display only records including book name, writer name and publication name. Save the query as "q\_book".

Prepare a query to display all records on the basis of price which is more than Rs500.

Prepare a form on the basis of table.

Prepare a report on the basis of query named "q\_book".

### **Practical List on Data Structures**

1. Program to maintain a Linked List.
2. Program to add a new node to the ascending order Linked List.
3. Program to maintain a Doubly Linked List.
4. Program to implement Stack as an Array.
5. Program to implement Stack as a Linked List.
6. Program to convert an A.E. from Infix form to Postfix form.
7. Program to evaluate an Expression entered in Postfix form.
8. Program to Implement Non-Recursive function for Factorial of a Number.
9. Program to Implement Recursive function for Factorial of a Number.
10. Program to implement a Queue as an Array.
11. Program to implement a Queue as a Linked List.
12. Program to implement a Circular Queue as an Array.
13. Program to implement a Circular Queue as a Linked List.
14. Program to implement a Deque using an Array.
15. Program to implement Linear Search in an unsorted Array.
16. Program to implement Binary Search in a sorted Array.
17. Program to implement Selection Sort.
18. Program to implement Insertion Sort (The program should report the number of comparisons).
19. Program to implement Bubble Sort.
20. Program to implement Quick Sort.

### **Digital Content Production (0331)**

1. What are the key components of a successful content strategy?
2. Write a blog post on a trending topic in your industry. Make sure it is optimized for SEO.
3. How do you create a compelling headline for an article?
4. Design a social media post using Canva or Adobe Spark. Explain your design choices.
5. Create a short video (30-60 seconds) promoting a product or service.
6. Analyze the traffic of a blog post using Google Analytics. What insights can you gather?
7. How would you handle negative comments or feedback on social media?
8. Plan a podcast episode on a topic of your choice. Include a script and list of guests.
9. How do you ensure high-quality audio and video for a live stream?
10. Discuss the importance of copyright laws in digital content production.