

(Abstract)

B.Sc. Computer Science programme under Choice Based Credit and Semester System (OBE) - Scheme and Syllabus of Practical Courses in 3rd, 4th, 5th and 6th Semesters - Implemented w.e.f 2019 admission- orders issued

ACADEMIC C SECTION

Acad/C2/12371/2019 (I)

Dated: 10.01.2022

- Read:-1. U.O No. Acad/C2/12371/2019 dated 21.06.2019
2. This office letter No. Acad C2/12371/2019 Dated 13.12.2021
3. Minutes of the meeting of Board of Studies in Computer Science (UG)

ORDER

1. As per paper read (1) above, the Scheme, Syllabus and Model Question Papers of the B.Sc. Computer Science Programme CBCSS-OBE were implemented in affiliated colleges w.e.f 2019 admission.
2. However, the detailed Scheme and Syllabus for Practical courses (**4B07CSC- DATABASE MANAGEMENT SYSTEM, 6B16CSC - JAVA PROGRAMMING, 6B17CSC- WEB TECHNOLOGY AND PYTHON PROGRAMMING**) were not included in the aforementioned Syllabus.
3. As per paper read(2) above, the meeting of Board of Studies in Computer Science (UG) held on 13.12.2021, finalised the Scheme and Syllabus of the Practical Courses in 3rd, 4th, 5th and 6th Semesters (**III & IV Semester 4B07CSC- DATABASE MANAGEMENT SYSTEM, V& VI Semester 6B16CSC - JAVA PROGRAMMING, V& VI 6B17CSC- WEB TECHNOLOGY AND PYTHON PROGRAMMING**) and updated the Syllabus of Practical Course **IV Semester:4B06CSC LAB2-DATA STRUCTURING USING C++** of B.Sc. Computer Science programme CBCSS-OBE w.e.f 2019 admission.
4. The Chairperson, BoS in Computer Science (UG) submitted the Scheme and Syllabus of Practical Courses in 3rd, 4th, 5th and 6th semesters of B.Sc. Computer Science programme CBCSS-OBE w.e.f 2019 admission, for approval, as per paper read (3) above.
5. The Vice Chancellor, after considering the matter in detail and in exercise of the powers of the Academic Council as per Section 11(1) Chapter III of Kannur University Act 1996, has accorded sanction to implement the Scheme and Syllabus of the Practical Courses in 3rd, 4th, 5th and 6th Semesters for the B.Sc. Computer Science Programme, [CBCSS-OBE applicable w.e.f 2019 admission], subject to reporting before the Academic Council.
6. The Scheme and Syllabus of Practical Courses in 3rd, 4th, 5th and 6th Semesters for B.Sc. Computer Science Programme, CBCSS-OBE w.e.f 2019 admission are uploaded in the University website www.kannuruniversity.ac.in.
7. U.O read (1) above, stands modified to this extent.

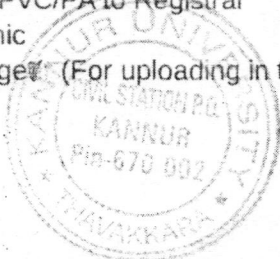
Orders are issued accordingly.

Sd/-

BALACHANDRAN V K
DEPUTY REGISTRAR (ACAD)
For REGISTRAR

To: The Principals of College offering B.Sc. Computer Science Programme

- Copy To: 1. The Chairperson, BoS in Computer Science (UG)
2. Examination Branch (Through PA to CE)
3. PS to VC/PA to PVC/PA to Registrar
4. DR/ARI Academic
5. The Web Manager (For uploading in the University Website)



Forwarded / By Order


SECTION OFFICER

CORE COURSE VI: 4B06CSC LAB 2 – DATA STRUCTURES USING C++

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
4	4B06CSC	3*	3	3

***Lab will be conducted for 3 hours each in III and IV Semesters**

SECTION – A

1. Implement dynamic memory allocation using new and delete operators
2. Implement inline functions.
3. Implement static function
4. Implement function overloading.
5. Implement friend function.
6. implement parameterized and copy constructor
7. Implement unary operator overloading.
8. Implement binary operator overloading
9. Implement inheritance.
10. Implement virtual function
11. implement virtual base class
12. implement sequential input and output operations on file

SECTION – B

1. Implement Linear search algorithm and print number of comparisons (1hr.)

Input: More than 20 numbers, Number to search

Output: Found/Not Found, No. of Comparisons

2. Implement Binary search algorithm and print number of comparisons (2hr.)

Input: Sorted List and Number to search

Output: Found/ Not Found, No. of Comparison

3. Implement Bubble sort algorithm and print number of comparisons (2hr.)

Input: Number of numbers must be greater than 20

Output: Sorted List, No. of Comparison

4. Implement Insertion sort algorithm and print number of comparisons (2hr.)

Input: Number of numbers must be greater than 20

Output: Sorted List, No. of Comparison

5. Implement Quick sort algorithm and print number of comparisons (2hrs.)

Input: Number of numbers must be greater than 20

Output: Sorted List, No. of Comparison

6. Evaluate polynomial entered by user with respect to given value of x (2hrs.)

Input: highest power of polynomial, Coefficients, value of x

Output: Value of polynomial with respect to given x value.

7. Add two general Polynomial(2hrs.)

Input: Highest Power of Each Polynomial and quotients of each power

Output: Resultant Polynomial

8. Extract substring of given dimension from given string (1hr.)

Input: String, Start Index, No. of characters

Output: Substring

9. Implement Stack Operations (2hr.)

Input: Size of Stack, choice for menu 1. Push 2. Pop 3. Traverse 4. Exit and data item

Output: with respect to choice

10. Evaluate post fix expression with the support of stack (2hrs.)

Input: Post Fix Expression

Output: Evaluated Result

11. Implement Queue Operations (2hrs.)

Input: Size of Queue, choice for menu 1. Insert 2.Delete 3. Traverse 4. Exit and item

Output: with respect to choice

12. Implement Circular Queue Operations (2hrs.)

Input: Size of Queue, choice for menu 1. Insert 2.Delete 3. Traverse 4. Exit and item

Output: with respect to choice

13. Implement following Linked list Operations (2hr.)

Input: Choice for menu 1. Insert 2.Delete 3. Traverse 4. Exit and data item

Output: with respect to choice

14. Implement following Two Way List Operations (3 hrs.)

Input: Choice for menu 1. Insert 2. Insert after a given node 3. Delete given node 4.

Delete 5. Traverse 6. Exit and data item

Output: with respect to choice

15. Implement following Binary Search Tree operations (3 hrs.)

Input: choice for menu 1. Insert 2.Delete 3. Infix traversal 4.Prefix 5. Postfix 6. Exit and item

Output: with respect to choice

CORE COURSE: 4B07CSC – LAB III

DATABASE MANAGEMENT SYSTEM

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
III & IV	4B07CSC	2+2*	2	3

*Lab will be conducted for 2 hours in III semesters and 2 hours in IV semester

DATABASE MANAGEMENT SYSTEM

Create table with required attributes and assign suitable constraints.

1. Implement DDL Statements in SQL.
2. Implement DML Statements in SQL.
3. Implement DCL statements in SQL.
4. Implement different Types Of Operator in SQL
 - Arithmetic (Eg: mark+10, sal=sal*3,...)
 - Relational (<, <=, >, >=, =)
 - Logical (AND,OR,NOT)
 - BETWEEN ...AND
 - LIKE
 - IN
5. Implement different types of SQL functions
 - Character Functions (Character Manipulation, Case Conversion)
 - Number Functions
 - Aggregate Functions
 - Group Functions

6. Implement Join Statements in SQL
 - Inner Join
 - Outer Join (Left outer join, Right outer Join)
7. Implement Sub queries in SQL.
 - Single Row Sub queries
 - Multiple Row Sub queries
8. Implement 'VIEW' in SQL.
9. Implement 'Sequence' In SQL.
10. Implement WHERE, GROUP BY, ORDER BY and HAVING CLAUSES in SQL.

CORE COURSE: 6B16CSC- LAB IV

JAVA PROGRAMMING

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
V&VI	6B16CSC	4+2*	3	3

*Lab will be conducted for 4 hours in V semesters and 2 hours in VI semester

1. Write a Java program to show the implementation of inheritance.
2. Write java program to implement interface.
3. Write java program that handles various exceptions. Use try –catch statement.
4. Write java program to implement Applet life cycle.
5. Implement a GUI based calculator application. It has two text fields for two input numbers ,one text field for result and four buttons named Add, Sub, Mul and Div for addition, subtraction, multiplication and division respectively..
6. Write a java program to demonstrate threads using runnable interface
7. Write a java program that creates three thread .First thread displays “Good Morning” every one second, the second thread displays “Hello” every two seconds and the third thread displays “Welcome” every three seconds..
8. Write a program to show an implementation of Packages.
9. Write a java program to show the implementation of method overriding
10. Write a java program to implement abstract class.

11. Write a program to draw various figures on a window. The user selects figure from a checkboxGroup, the selected figure is then displayed in the canvas.
12. Write a java program to implement JDBC

CORE COURSE: 6B17CSC LAB 5

WEB TECHNOLOGY AND PYTHON PROGRAMMING

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
V&VI	6B17CSC	4+2*	3	3

*Lab will be conducted for 4 hours in V semester and 2 hours in VI semester

PART A – WEB TECHNOLOGY

1. Design a webpage containing the Programmes offered in your college with different types of headings, links and lists.
2. Insert an image into the web page. Use appropriate attributes
3. Design a webpage showing the mark list of a student of B. Sc. Computer Science using Table. Use different attributes as necessary.
4. Design an application form for admission to a course. It should contain different types of inputs. Use autocomplete attribute also.
5. Write a JavaScript code using functions to perform arithmetic operations on two numbers.
6. Write a JavaScript code to sort and reverse array elements.
7. Java Script code to find the factorial of a number using recursion
8. Java Script cod to show the working of math object. (Use at least 3 math functions)
9. JavaScript code to display the current Date and Time.

10. Java script code to illustrate dialog boxes.

PART B-PYTHON PROGRAMMING

1. Write a program to find the largest from a list of numbers
2. Write a program to generate first n perfect numbers
3. Write a program to perform the binary search
4. Write a program to find the square root of a number using bisection search method.
5. Write a program to generate Fibonacci series using recursion
6. Write a program to find the LCM and GCD of 2 numbers
7. Write a program to perform merge sort
8. Write a program which reads the contents of a file and copy the contents to another file after changing all the letter to upper case. Exceptions should be handled.
9. Write a program to find the prime numbers in a list of numbers.
10. Write a python program to perform the following
 - a) Create table students with fields name, sex, rollno, marks
 - b) Insert some rows into the table
 - c) Update the marks of all students by adding 2 marks
 - d) Delete a student with a given rollno
 - e) Display the details of a student with a given rollno