Telephone No: 2419208/2419315/2419219/2419361
Fax: 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

UNIVERSITY OF MYSORE

Established: 1916

Vishwavidyanilaya Karyasoudha,
Crawford Hall, Mysore-570 005.

Dated: 19.08.2020

No.AC.2(S)/378/2020-21

NOTIFICATION

Sub: Minor modifications in the Syllabus of B.Sc. and B.C.A. programs from the academic year 2020-21.

Ref: 1. Decision of Board of Studies in Computer Science (UG) meeting held on 13.12.2019.
2. Decision of the Faculty of Science & Technology Meeting held on 18.02.2020.
3. Decision of Academic Council meeting held on 18.06.2020.

*****

The Board of Studies in Computer Science (UG) which met on 13.12.2019 has recommended to make modifications in the syllabus of following papers for different semesters of B.Sc. & B.C.A. programs as follows from the academic year 2020-21.

1. Database Management System for IV Semester B.Sc. (DSC-3D)
2. Database Management System for IV Semester B.C.A. (DSC-10)
3. Web Technology for VI Semester BCA (DSE-8)
4. Web Programming for VI Semester B.Sc. (DSE-3B(i))

The Faculty of Science and Technology and Academic Council meeting held on 18.02.2020 and 18.06.2020 respectively have approved the above said proposal and the same is hereby notified.

The list of modified syllabus for different semesters papers of B.Sc. & B.C.A. programs is annexed. The contents may be downloaded **from the University Website i.e.,** www.uni-mysore.ac.in.

Draft approved by the Registrar

Deputy Registrar(Academic),
Deputy Registrar (Academic)
University of Mysore
Mysore-570 005

To:

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Dean, Faculty of Science & Technology, DOS in Psychology, MGM.
3. The Chairperson, BOS in Computer Science(UG), DOS in Computer Science, Manasagangotri, Mysore.
4. The Chairman, DOS in Computer Science, Manasagangotri, Mysore.
5. The Director, College Development Council, Moulya Bhavan, Manasagangotri, Mysore.
6. The Deputy/Assistant Registrar/Superintendent, AB and EB, UOM, Mysore.
7. The P.A. to the Vice-Chancellor/Registrar/Registrar (Evaluation), UOM, Mysore.
8. Office file.

Annexure-C

Lab Cycle for IV Semester B.Sc (DSC-3D) and IV Semester BCA (DSC-10)
Paper Title: Database Management System

Activity 1:
Database : Student (DDL, DML statements)
Table: Student

Name	Regno	Class	Major
Smith	17	1	CS
Brown	8	2	CS

Table: Course

CourseName	CourseNumber	CreditHours	Department
Intro to computer science	CS1310	4	CS
Data Structure	CS3320	4	CS
Discrete Mathematics	MATH2410	3	MATH
Database	CS3380	3	CS

Table: Section

SectionIndentifier	CourseNumber	Year	Instructor
85	MATH2410	98	King
92	CS1310	98	Andreson
102	CS3320	99	Knuth
112	MATH2410	99	Chang
119	CS1310	99	Andreson
135	CS3380	99	Stone

Table: Grade_report

Regno	Section_identifier	Grade
17	112	B
17	119	C
8	85	A
8	92	A
8	102	B
8	135	A

- **Create Tables using create statement**
- **Insert rows to individual tables using insert statement**
- **Alter table section add new field section and update the records**
- **Delete brown's grade report**
- **Drop the table section**

Activity 2: (Select clause, Arithmetic Operators)
Database: employee
Create Following **tables** and insert **tuples** with suitable constraints

EMPLOYEE

EMPID	FIRSTANAME	LASTNAME	Hire_Date	ADDRESS	CITY
1001	George	Smith	11-May-06	83 first street	Paris
1002	Mary	Jones	25-Feb-08	842 Vine Ave	Losantiville
1012	Sam	Tones	12-Sep-05	33 Elm St.	Paris
1015	Peter	Thompson	19-Dec-06	11 Red Road	Paris
1016	Sarath	Sharma	22-Aug-07	440 MG Road	New Delhi
1020	Monika	Gupta	07-Jun-08	9 Bandra	Mumbai

EMPSALARY

EMPID	SALARY	BENEFITS	DESIGNATION
1001	10000	3000	Manager
1002	8000	1200	Salesman
1012	20000	5000	Director
1015	6500	1300	Clerk
1016	6000	1000	Clerk
1020	8000	1200	Salesman

Write queries for the following

1. To display FIRSTNAME, LASTNAME, ADDRESS AND CITY of all employees living in PARIS.
2. To display the content of employee table in descending order of FIRSTNAME
3. Select FIRSTNAME and SALARY of salesman
4. To display the FIRSTNAME,LASTNAME, AND TOTAL SALARY of all employees from the table EMPLOYEE and EMPSALARY. Where TOTAL SALARY is calculated as SALARY+BENEFITS
5. List the Names of employees, who are more than 1 year old in the organization
6. Count number of distinct DESINGATION from EMPSALARY
7. List the employees whose names have exactly 6 characters
8. Add new column PHONE_NO to EMPLOYEE and update the records
9. List employee names, who have joined before 15-Jun-08 and after 16-Jun-07
10. Generate Salary slip with Name, Salary, Benefits, HRA-50%, DA-30%, PF-12%, Calculate gross. Order the result in descending order of the gross.

Activity 3: (Logical, Relational Operators)

Database: Library
Create Following **tables** and insert **tuples** with suitable constraints

Table: Books

Book_Id	Book_name	Author_Name	Publishers	Price	Type	Quantity
C0001	The Klone and I	Lata Kappor	EPP	355	Novel	5
F0001	The Tears	William Hopkins	First Publ	650	Fiction	20
T0001	My First C++	Brain & Brooke	ERP	350	Text	10
T0002	C++ Brainworks	A.W.Rossaine	TDH	350	Text	15
F0002	Thunderbolts	Ana Roberts	First Publ.	750	Fiction	50

Table : Issued

Book_Id	Quantity_Issued
T0001	4
C0001	5
F0001	2
T0002	5
F0002	8

Write queries for the following

1. To show Book name, Author name and price of books of **First Publ**. publisher
2. Display Book id, Book name and publisher of books having quantity more than 8 and price less than 500
3. Select Book id, book name, author name of books which is published by other than ERP publishers and price between 300 to 700
4. Generate a Bill with Book_id, Book_name, Publisher, Price, Quantity, 4% of VAT "Total"
5. Display book details with book id's C0001, F0001, T0002, F0002 (Hint: use IN operator)
6. Display Book list other than, type Novel and Fiction
7. Display book details with author name starts with letter 'A'
8. Display book details with author name starts with letter 'T' and ends with 'S'
9. Select BookId, BookName, Author Name , Quantity Issued where Books.BooksId = Issued.BookId
10. List the book_name, Author_name, Price. In ascending order of Book_name and then on descending order of price

Activity 4: (Date Functions)
Database : Lab
Create Following **table** and insert **tuples** with suitable constraints

Table : Equipment_Details

No	ItemName	Costperitem	Quantity	Dateofpurchase	Warranty	Operational
1	Computer	30000	9	21/5/07	2	7
2	Printer	5000	3	21/5/06	4	2
3	Scanner	8000	1	29/8/08	3	1
4	Camera	7000	2	13/6/05	1	2
5	UPS	15000	5	21/5/08	1	4
6	Hub	8000	1	31/10/08	2	1
7	Plotter	25000	2	11/1/09	2	2

(Use date functions and aggregate functions)

1. To select the ItemName purchase after 31/10/07
2. Extend the warrenty of each item by 6 months
3. Display Itemname , Dateof purchase and number of months between purchase date and present date
4. To list the ItemName in ascending order of the date of purchase where quantity is more than 3.
5. To count the number, average of costperitem of items purchased before 1/1/08
6. To display the minimum warranty , maximum warrenty period
7. To Display the day of the date , month , year of purchase in characters
8. To round of the warranty period to month and year format.
9. To display the next Sunday from the date '07-JUN-96'
10. To list the ItemNaName, which are within the warranty period till present date

Activity 5: (Numeric and character functions)
Use Functions for the following

1. Find the mod of 165,16
2. Find Square Root of 5000
3. Truncate the value 128.3285 to 2 and -1 decimal places
4. Round the value 92.7683 to 2 and -1 decimal places
5. Convert the string 'Department' to uppercase and lowercase
6. Display your address convert the first character of each word to uppercase and rest are in lowercase
7. Combine your first name and last name under the title Full name
8. A) Take a string length maximum of 15 display your name to the left. The remaining space should be filled with '*'
9. Take a string length maximum of 20 display your name to the right. The remaining space should be filled with '#'
10. Find the length of the string 'JSS College, Mysore'
11. Display substring 'BASE' from 'DATABASE'
12. Display the position of the first occurrence of character 'o' in Position and Length
13. Replace string Database with Datatype
14. Display the ASCII value of ' ' (Space)
15. Display the Character equivalent of 42

Activity 6:
Database : subject
Create Following **table** and insert **tuples** with suitable constraints
Table - Physics

Regno	Name	Year	Combination
AJ00325	Ashwin	First	PCM
AJ00225	Swaroop	Second	PMCs
AJ00385	Sarika	Third	PME
AJ00388	Hamsa	First	PMCs

Table – Computer Science

Regno	Name	Year	Combination
AJ00225	Swaroop	Second	PMCs
AJ00296	Tajas	Second	BCA
AJ00112	Geetha	First	BCA
AJ00388	Hamsa	First	PMCs

1. Select all students from physics and Computer Science
2. Select student common in physics and Computer Science
3. Display all student details those are studying in second year
4. Display student those who are studying both physics and computer science in second year
5. Display the students studying only physics
6. Display the students studying only Computer Science
7. select all student having PMCs combination
8. select all student having BCA combination
9. select all student studying in Third year
10. Rename table Computer Science to CS

Activity 7: (views)
Database: Railway Reservation System
Create Following **table** and insert **tuples** with suitable constraints

Table: Train Details

Train_no	Train_name	Start_place	Destination
RJD16	Rajdhani Express	Bangalore	Mumbai
UDE04	Udhyan Express	Chennai	Hyderabad
KKE55	Karnataka Express	Bangalore	Chennai
CSE3	Shivaji Express	Coimbatore	Bangalore
JNS8	Janashatabdi	Bangalore	Salem

Table : Availability

Train_no	Class	Start_Place	Destination	No_of_seats
RJD16	Sleeper Class	Banglore	Mumbai	15
UDE04	First Class	Chennai	Hyderabad	22
KKE55	First Class AC	Bangalore	Chennai	15
CSE3	Second Class	Coimbatore	Bangalore	8
JNS8	Sleeper Class	Bangalore	Salem	18

1. Create view **sleeper** to display train no, start place, destination which have sleeper class and perform the following
    a. insert new record
    b. update destination=’Manglore’ where train no=’RJD16’
    c. delete a record which have train no=’KKE55’
2. Create view **details** to display train no, train name, class
3. Create view **total_seats** to display train number, start place, use count function to no of seats , group by start place and perform the following
    a. insert new record
    b. update start place=’Hubli’ where train no=’JNS8’
    c. delete last row of the view
4. Rename view sleeper to class
5. Delete view details

Activity 8 (group by, having clause)
Database: Bank system
Create Following **table** and insert **tuples** with suitable constraints

Table: Account

Account_no	Cust_Name	Brach_ID
AE0012856	Reena	SB002
AE1185698	Akhil	SB001
AE1203996	Daniel	SB004
AE1225889	Roy	SB002
AE8532166	Sowparnika	SB003
AE8552266	Anil	SB003
AE1003996	Saathwik	SB004
AE1100996	Swarna	SB002

Table: Branch

Branch_ID	Branch_Name	Branch_City
SB001	Malleshwaram	Bangalore
SB002	MG Road	Bangalroe
SB003	MG Road	Mysore
SB004	Jainagar	Mysore

Table: Depositor

Account_no	Branch_Id	Balance
AE0012856	SB002	12000
AE1203996	SB004	58900
AE8532166	SB003	40000
AE1225889	SB002	150000

Table: Loan

Account_no	Branch_Id	Balance
AE1185698	SB001	102000
AE8552266	SB003	40000
AE1003996	SB004	15000
AE1100996	SB002	100000

1. Display Total Number of accounts present in each branch
2. Display Total Loan amount in each branch
3. Display Total deposited amount in each branch by descending order
4. Display max , min loan amount present in each city.
5. Display average amount deposited in each branch , each city
6. Display maximum of loan amount in each branch where balance is more than 25000
7. Display Total Number of accounts present in each city
8. Display all customer details in ascending order of brachid
9. Update Balance to 26000 where accno=AE1003996
10. Display Customer Names with their branch Name

Lab Cycle for IV Semester BCA (DSC-11)
Paper Title : Numerical and Statistics Analysis

PART-A

1. Program to solve the given equation x*x-14=0 by using Bisection method.

2. Program to solve the given equation x*x+5*x-6=0 by using Regula Falsi method.

3. Program to solve the given equation x*x*x*-12=0 by using Newton Raphson method.

4. Program to solve the given equation dy/dx=1+y*y where y(0)=1,h=0.1,find y(0.4) using Eulers method.

5. Program to solve the given equation dy/dx=x*y where y(1)=2,h=0.3,find y(1.4)by using Rungekutta's II order method.

6. Program to solve the given equation dy/dx= x*y where y(1)=2,h=0.3,find y(1.4) by using Rungekutta's IV order method.

7. Program to solve the given equation $\int dx/(1+x)$ where, a=0,b=1,n=10 by using Trapezoidal method.

8. Program to solve the given equation $\int \sin x\, dx$ where a=0,b=π /2,n=6 by using Simpson's 1/3 rule.

9. Program to solve the given equation $\int \sin x\, dx$ where a=0,b=π /2,n=6 by using Simpson's 3/8 rule.

PART-B

10. Program to solve the following set of simultaneous equation x+y+4z=12, 8x-3y+2z=20,4x+11y-z=33 using the Guass Elimination method.

11. Program to solve the following set of simultaneous equation $2x_1+6x_2-x_3=-14$,$5x_1-x_2+2x_3=29$,$-3x_1-4x_2+x_3=4$ using Guass Jordon method.

12. Program to compute mean, median and standard deviation of n elements using linear array for ungrouped data.

13. Program to computer mode of n elements using linear array for ungrouped data.

14. Program to calculate correlation co-efficient for ungrouped data.

15. Program to generate frequency distribution table.

Lab Cycle for II Semester BCA (DSC-5)
Paper Title: System Software and Operating System

Part A (Office Automation)

1. Using Ms-Word with suitable examples, write the steps and execute the following with respect to table handling
   i. Creating a table (At least 4 Columns and 6 Rows).
   ii. Entering appropriate data into the table.
   iii. Sort the table.
   iv. Apply the formulas on table numeric values.

2. Using Ms-Word write the steps and execute for creating "Mail Merge" document for "FORM LETTERS".

3. Using Ms-Excel spread sheet, with suitable example, write steps and create worksheet called "Employee" and calculate the following using formulas
   i. Enter Employee Code, Name and Basic Salary.
   ii. Calculate DA (20% of Basic Salary).
   iii. Calculate HRA (10% of Basic Salary).
   iv. Calculate CCA (8.5% of Basic Salary).
   v. Calculate Total Salary (Basic Salary + DA + HRA + CCA)
   vi. Calculate Deductions (10% of Total Salary).
   vii. Calculate Net Salary (Total Salary – Deductions).

4. Using Ms-Excel draw X-Y Line Chart and Bar Charts based on the following worksheet data and write the steps

ITEM	**MONTHLY SALES (in Thousands)**
Cotton	2,750
Wool	3,100
Yarn	2,975
Jute	2,100
Fiber	3,010

5. Using Ms-Excel spreadsheet write the steps and execute the following:

Roll No	Stud Name	Marks1	Marks2	Mark3	Total	Percen-tage	Result

   i. Create appropriate records
   ii. Calculate total and marks using formula.
   iii. Update result column using IF function.
   (Result: Distinction, First Class, Second Class, Pass, Fail).

6. Using Ms-Access with suitable examples write steps and execute the following.
   i. Create STUDENT database table.

ii. Create appropriate records.
iii. Add two more records to the table.
iv. Delete 2nd record to the table.
v. View the records.

7. Using Ms-Access with suitable examples write steps and execute the following.
   i. Create EMPLOYEE database table.
   ii. Create appropriate records.
   iii. Sort the records in ascending order of name.
   iv. Sort the records in descending order of salary.
   v. View the records

8. Using Ms-PowerPoint with suitable examples write steps and execute the following:
   i. Create presentation slides with Titles, Sub Titles and Charts choosing different slide layouts.
   ii. Use Design templates for background.
   iii. Format the slide design.

9. Using Ms-PowerPoint with suitable examples write steps and execute the following:
   i. Create presentation table slides using an organization chart.
   ii. Use different views such as slide view, slide sorter view and slide show view.

PART B (Shell Script)

1. Write a shell script to exchange the contents of two variables.
2. Write a shell script, which accepts three subject marks scored by a student and declare the result.
3. Write a shell script to print integer numbers from 1 to 20.
4. Write a shell script to perform arithmetic operation on two number depending on +, -, * and /.
5. Write an interactive shell script to display a menu and perform the following task:
   i. Renaming a file ii. Deleting a file
   iii. Copying a file iv. Exit
6. Write a shell script which counts the number of lines in a file.
7. Write a shell script to accept three command line arguments and display each one of them.
8. Write a c program to
   a. Display the PID of parent and PID of child.
   b. Copy the contents of one file into the other using command line arguments.
9. Assume a file with following information

FirstName	MiddleName	Age

Write a shell script
   i. To Sort the first name in alphabetical order.
   ii. Sort the age in terms of ascending order.

iii. Sort the age in terms of descending order.
iv. Sort the middle name in alphabetical order.

10. Write a Shell script to display
    i. The version of the shell.
    ii. The user information.
    iii. Login date and time.
    iv. List of processes running on the system.
    v. User home directory