

1911000103060001-A
EXAMINATION APRIL 2024
BACHELOR OF COMPUTER APPLICATIONS
(PRACTICAL) (THIRD SEMESTER)
BCA SEM-3 (PRACTICAL -306)

[Time: Five Hours]

[Max. Marks: 140]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination: **BACHELOR OF COMPUTER APPLICATIONS (PRACTICAL) (THIRD SEMESTER)**
 - b. Name of the Subject: **BCA SEM-3 (PRACTICAL -306)**
 - c. Subject Code No: **1911000103060001-A**
2. Sketch neat and labelled diagram wherever necessary.
 3. Figures to the right indicate full marks of the question.
 4. All questions are compulsory.

Seat No:

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Student's Signature

- Q.1** Create a csv file daily-tempreture.csv contain date, temperature. Create a python script to perform following task. **40**
1. Add 10 record in csv file
 2. Read data in Data frame
 3. Create a line chart to visualize the data.
 4. Label the x-axis with the date
 5. Label the y-axis with the temperature.
- Q.2** Write a C++ program to perform operations on simple queue like Insert, Delete and Display. **40**
- Q.3** Create a web application for online books store with registration, book information and member information page and contact information page. (apply proper CSS/BOOTSTRAP and validations) **40**

OR

Create an android application to hide the title bar and open app in full screen mode, design a screen which allows to enter his/her name. On button click, display greeting message and name entered by user on next screen. Use appropriate layout.

Q.4 Viva+ Journal

20

1911000103060001-B
EXAMINATION APRIL 2024
BACHELOR OF COMPUTER APPLICATIONS
(PRACTICAL) (THIRD SEMESTER)
BCA SEM-3 (PRACTICAL -306)

[Time: Five Hours]

[Max. Marks:140]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination: **BACHELOR OF COMPUTER APPLICATIONS (PRACTICAL) (THIRD SEMESTER)**
 - b. Name of the Subject: **BCA SEM-3 (PRACTICAL -306)**
 - c. Subject Code No: **1911000103060001-B**
2. Sketch neat and labelled diagram wherever necessary.
 3. Figures to the right indicate full marks of the question.
 4. All questions are compulsory.

Seat No:

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Student's Signature

Q.1 Write a Python code to implement following operation on Employee table using SQLite module. 40

Employee (emp_no, emp_name, emp_city, emp_designation, emp_salary)

Write a menu driven python script perform following task

- insert records
- Display all records using cursor.
- Display employee detail with highest salary

Q.2 Create a base class Patient (pat-name, age, sex) and IPD (ward-no, bed-no, charge-per-day). Derive a class IPD-patient from these two base classes with no-of-days- admitted attribute to display information of patient who admitted more than five days. 40

Q.3 Design a website for a pizza-parlor with following pages

40

- Page that contains all types of pizza available.
 - Page that provides information about the combo offers.
 - Registration page for customer.
 - Login page for customer.
- [user bootstrap framework and apply validation where required]

OR

Create an android application using toggle buttons which will have following functionalities:

- a. One toggle button will turn on and off Bluetooth. Display text "Bluetooth: On/off" according to its state.
- b. Second toggle button will turn on and off wi-fi. Display text "Wi-fi: On/off" according to its state.
- c. You appropriate layout to place components.
- d. On button click display current state of both toggle buttons in toast

Q.4 Viva+ Journal

20

2111000103010002
EXAMINATION MARCH 2024
BACHELOR OF COMPUTER APPLICATIONS
(THIRD SEMESTER)
STATISTICAL METHODS

[Time: Three Hours]

[Max. Marks: 70]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination: **BACHELOR OF COMPUTER APPLICATIONS (THIRD SEMESTER)**
- b. Name of the Subject: **STATISTICAL METHODS**
- c. Subject Code No: **2111000103010002**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.
5. Use of non-scientific calculator is allowed.

Seat No:

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Student's Signature

Q.1 Do as directed. (Any seven)

14

1. For the following data mean is 60 then find median.

Marks	30	36	42	64	70
No. of students	4	12	16	10	8

2. Define the term variance and standard deviation. Also state the relation between them.
3. Find geometric mean and harmonic mean of four values 27, 36, 108 and 16.
4. Find range and coefficient of range of 70, 61, 73, 67, 64
5. If the sum of multiplication of mid value and frequency is 450 and total frequency is 9 then find mean.
6. If the values of x and y are very bigger then which formula reduce the values to obtain correlation coefficient?
7. If $r = -0.5$, $b_{xy} = -25$ then find the value of b_{yx}
8. State the formula of standard error for correlation coefficient r and N number of pairs.
9. If one regression coefficient is greater than 1 then what about other? Justify.
10. If demand function is $4p + 20$ then find demand for price $p = 20$

Q.2 Attempt any Two.

14

1. Find the value of an if median is 24.

Marks	0-10	10-20	20-30	30-40	40-50
No. of students	5	25	a	18	7

2. From the following data find the value of mean and mode:

Class	50-53	53-56	56-59	59-62	62-65	65-68	68-71	71-74	74-77
Frequency	3	8	14	30	36	28	16	10	5

3. Find Median for the following data of a class of 50 students.

More than marks	1	10	20	30	40	50
No. of students	50	46	40	20	10	3

Q.3 Attempt any Two.

14

1. Find quartile deviation and its coefficient from the following table.

Weight in kgs	60	61	62	63	65	70	75	80
No. of members	1	3	5	7	10	3	1	1

2. The mean and variance calculated for a group of 80 observations are 63.2 and 25.93 respectively. If 60 of these observations have mean 64.8 and standard deviation is 4, find the mean and standard deviation of remaining 20 observations.

3. Find coefficient of mean deviation from mean using the following data.

Size	0-3	3-6	6-9	9-12	12-15	15-18	18-21
Frequency	2	7	10	12	9	6	4

Q.4 Attempt any Two.

14

1. Calculate Karl Pearson's coefficient of correlation from the following data.

Age of Husband	23	27	28	28	28	30	30	33	35	38
Age of wife	18	20	22	27	21	29	27	22	28	29

2. From the following data calculate rank correlation coefficient between sales and expenses for following 10 items:

items	1	2	3	4	5	6	7	8	9	10
sales	50	50	55	60	65	65	65	60	60	60
expenses	11	13	14	16	16	16	15	14	13	13

3. Find correlation coefficient using following data:

$$n = 10, \quad \sum x = 225, \quad \sum y = 189, \quad \sum (x - 22)^2 = 85,$$

$$\sum (y - 19)^2 = 25, \quad \sum (x - 22)(y - 19) = 43$$

Q.5 Attempt any Two.

14

1. Calculate the two regression lines from the following data find the value of y for x = 65.

x	57	58	59	59	60	61	62	64
y	77	78	75	78	82	82	79	81

2. The following results are obtained from A and B

Share	A	B
Average	39.5	47.5
variance	116.64	256

If correlation coefficient between the prices of shares is 0.42 then find most likely price of share A corresponding to price of share B is Rs. 55.

3. Define correlation coefficient. With example explain the importance of correlation coefficient between two variables.

2111000103030002
EXAMINATION MARCH 2024
BACHELOR OF COMPUTER APPLICATIONS
(THIRD SEMESTER)
DATABASE HANDLING USING PYTHON

[Time: Three Hours]

[Max. Marks: 70]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination : **BACHELOR OF COMPUTER APPLICATIONS (THIRD SEMESTER)**
 - b. Name of the Subject : **DATABASE HANDLING USING PYTHON**
 - c. Subject Code No : **2111000103030002**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

Q.1 Answer in short (Any 7):

14

1. What do you mean by IS NULL?
2. What is meaning of Commit?
3. What is the use of legend()?
4. Explain show() of matplotlib.
5. Differentiate import and from....import.....
6. Explain to_numpy() in brief.
7. What is the significance of describe()?
8. What is CASE statement in SELECT?
9. How can we enable or disable a trigger in sqlite?
10. Explain head() and tail() in DataFrame.

Q.2 Do as directed:

- A. Explain Data Filtering using LIKE, WHERE and IN with example. **7**

OR

Explain Sqlite DataTypes in detail. **7**

- B. Explain the concept of modules. How can we use modules in python? **5**

OR

Write a note on: Insert, Update and delete using Triggers in Sqlite. **5**

- C. Write code to create a DataFrame from a list. **2**

- Q.3 Do as directed:**
- A. What is DataFrame? How to extract specific attributes and rows from a DataFrame? **7**
- OR**
- Explain Select, Insert, update, delete using execute () method **7**
- B. Explain Histograms in python with example. **5**
- OR**
- Explain Bar Charts in python with example. **5**
- C. What is Self Join? Explain in brief. **2**
- Q.4 Do as directed:**
- A. Explain File Handling using CSV module. **7**
- OR**
- Consider a table "tbl_Emp" in Database "MyDB.db" having fields like emp_no, emp_name, age, salary. Write python code to generate emp.csv file having all employees whose age > 25. **7**
- B. Explain range(), subplot(), columns() and len() with example. **5**
- OR**
- Explain mean(), median() and mode() of numpy with example. **5**
- C. Explain the concepts of Namespace and scope in python. **2**
- Q.5 Write a note on (Any 2):** **14**
1. Sqlite dump command
 2. Functions of CSV module
 3. HAVING, ORDER BY and Conditional Logic (CASE)
 4. Matplotlib library

2111000103040002
EXAMINATION MARCH 2024
BACHELOR OF COMPUTER APPLICATIONS
(THIRD SEMESTER)
OOPS AND DATA STRUCTURES

[Time: Three Hours]

[Max. Marks: 70]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination : **BACHELOR OF COMPUTER APPLICATIONS (THIRD SEMESTER)**
 - b. Name of the Subject : **OOPS AND DATA STRUCTURES**
 - c. Subject Code No : **2111000103040002**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

Q.1 Answer the following in short (Any Seven):

14

1. What is a class?
2. List out applications of queue.
3. Define inline function.
4. What is abstraction?
5. What are the main features of OOPS?
6. Define Type conversion.
7. Write a difference between Simple Queue and Circular Queue.
8. Explain pure virtual function.
9. What is Constructor with default argument?

Q.2 Answer the following in short: (Any TWO)

14

1. What is friend function? Why we need to write friend function? Explain with example. Discuss its advantages.
2. Explain default argument and function prototyping with an example.
3. What is constructor? Explain parameterized constructor with an example.

Q.3 Answer the following in short: (Any TWO)

14

1. How to remove ambiguity occurred in the case of hybrid inheritance?
2. List out features of object oriented programming. Explain polymorphism and encapsulation with an example.
3. What is stack? Write algorithms of various stack operations.

Q.4 Answer the following in short:

14

1. Define Circular Queue. Discuss advantages of Circular Queue over simple Queue. Write algorithms to insert and delete element in circular queue.

OR

1. Explain virtual function in detail with example.
2. Explain any 3 inbuilt string functions with example.

Q.5 Answer the following in short:

14

1. Write a program to create class bike having data members like Brand, Model. Create member functions getdata () and display () which accepts bike detail from user and display it on the screen.

OR

1. Write a program to add two time objects and display the sum using friend function.
2. Write algorithms to perform insert and delete operations on simple queue

2111000103050003
EXAMINATION MARCH 2024
BACHELOR OF COMPUTER APPLICATIONS
(THIRD SEMESTER)
MOBILE APPLICATION DEVELOPMENT-I

[Time: Three Hours]

[Max. Marks: 70]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination : **BACHELOR OF COMPUTER APPLICATIONS (THIRD SEMESTER)**
 - b. Name of the Subject : **MOBILE APPLICATION DEVELOPMENT-I**
 - c. Subject Code No : **2111000103050003**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

Q.1 Write answer in short (Any 7)

14

1. What is multiplexing?
2. What is API? How it is important in Android Development?
3. Define WAP.
4. Explain Prolog section of XML.
5. What is the use of getTextOff and getTextOn Methods.
6. What is Activity in android?
7. Listout any 3 TextView properties with its use.
8. When we use Toast?

Q.2 Answer the following

- A. Explain Android Manifest File in detail. **07**
- B. How we can handle Screen Orientation? Explain. **07**

OR

- A. Explain Toast Class and its parameters with Example. **07**
- B. Explain Features of Android. **07**

Q.3 Answer the following (Any 2)

14

1. Define Spectrum. Explain how Bluetooth technologies works.
2. What is Android SDK? Explain in detail.
3. Explain the concept of Dalvik Virtual Machine.

Q.4 Answer the following (Any 2)

14

1. Write down the steps of hiding Title bar.
2. Explain how button Click can be handled in Android with Example.
3. What is AVD? How to create Virtual Machine in Android Studio?

Q.5 Explain the following in brief (Any 2)

14

1. Toggle Button
2. CheckBox
3. Mobile Agents
