

Sai Nath University

Assignment For BCA 4TH Sem.

The Assignment will consist of two parts, A and B. Part A will have 5 short answer questions(40-60 words) of 4 marks each. Part B will have 4 long answer questions of 5 marks each.

All questions are compulsory.

These Assignments should be completed and submitted in written form by the student to his/her respective Faculty/ Examiners. Assignment Submission Dates are:

➤ **June-18**

List Of Suggested Questions

The list of suggested questions is for students to practice. Although optional, we recommend that students solve these questions, as they will help them in preparing for exams as well as in clearing the important concepts of the subject.

List of Practical and suggested practical's

The list of practical's should be done by the students in their Lab Sessions. These are the basic practical's, which each student should be able to do himself independently. While the list of suggested practicals are optional, but it is recommended that students should perform those practical so as to have a thorough knowledge of the subject

Education Delivery Schedule (EDS)

As per University Semester scheme, the minimum contact hours of each paper has been

Divided into two hours theory and practical class.

The faculty will maintain this attendance paper wise for his/her batch.

Subject Code	Subject Name
BCA 410	DATA BASE MANAGEMENT SYSTEM
BCA 420	Numerical Method and Statistical Method
BCA 430	Linux Administration
BCA 440	Introduction to Microprocessor
BCA 630	SOFTWARE LAB (WEB TECHNOLOGY)
BCA 640	SOFTWARE LAB (.NET FRAME WORK AND C#)

SAI NATH UNIVERSITY

Cover page of Assignment

ID NUMBER
NAME
COURSE BCA.....
STREAM
SEM 4TH
SUBJECT CODE
SUBJECT NAME

Assignments will be completed by the Student in his/her own handwriting.

BCA 410

DATABASE MANEGEMT SYSTEM

Part A

1. What is Distributed Database Management System ? Explain the structure of Distributed Database. Explain three issues related to data replication in Distributed Database.
2. What is Knowledge ? How is it different from data ? Explain the difference between DBMS and Knowledge Based System.
3. Explain how Object Oriented Database Management System (OODBMS) is better than Relational Database Management System 4. What is Re-Engineering ? How does it differ from Reverse Engineering.
4. What are the different types of keys in RDBMS ? Explain their significance with the help of an example of each.

Part B

1. What is multivalued dependency ? Explain Fourth Normal Form (4NF) with the help of an example.
2. What is Index Sequential File Organization ? Explain Primary, Clustering and Multilevel Indexing schemes with the help of examples.
3. What is Data Fragmentation ? Explain Vertical Fragmentation with the help of an example.
4. Write short notes on :
 - a. Structured Query Language (SQL)
 - b. Knowledge Representation Schemes
 - c. Three Level Architecture of DBMS

BCA 420

NUMERICAL METHOD AND STATICAL METHOD

Part A

1. Calculate $x - y$, for the following two floating-point numbers :

$$x = 0.8706 \times 10^{-3}, \quad y = 0.7604 \times 10^{-2}$$

2. Find an interval in which the following equation has a root :

$$2x^2 + 6x - 7 = 0$$

3. Using either Gauss-Jacobi iterative method or Gauss elimination method with partial pivoting, solve the following system of linear equations :

4. Write a prolog program to identify the grandfather relation. You can create a knowledge base of your choice.

$$3x - 5y + 6z = 11$$

$$5x - 11z = 28$$

$$2y + 9z = 31$$

5. Discuss the merits and demerits of direct approach over iterative approach for solving a system of linear equations.

Part B

1. Using Euler's method, tabulate the solution of the Initial Value Problem (IVP)

$$y' = -3ty^2, \quad y(0) = 1 \text{ in the interval } [0, 1], \text{ using } h = 0.2.$$

2. Estimate the missing term in the following data using FD (Forward Difference) assuming that the data is a valid representation of a polynomial of degree 3.

X	1.00	1.20	1.40	1.60	1.80
F(x)	2.7183	?	4.0552	4.9530	6.0490

3. Using 8-decimal digit floating-point representation (4 digits for mantissa, 2 digits for exponent, and one each for sign of exponent and mantissa), represent the following numbers (use chopping, if required) :

(I). -76.384

(II)0.00079542

4. Explain the following two concepts with a suitable example for each :

(I) Chopping Error.

(ii) Rounding Error.

BCA 430

Linux Administrator

Part A

1. How do I create a swap file in an existing Linux data partition?
2. I already have a large swap file in my Windows partition. Is there a way for Linux to use that swap space instead of creating another file?
3. How do I get Netscape for Linux to recognize my Netscape for Windows bookmark file?
- 4 . If Linux is not using all the memory I have installed, how do I make it use the rest?
5. What is my floppy drive called in Linux?

Part B

1. What could possibly be the problem when a command that was issued gave a different result from the last time it was use
2. How can you append one file to another in Linux?
3. How you can run an Linux program in the background simultaneously when you start your Linux Server?
4. Explain how to uninstall the libraries in Linux?

BCA 440

Introduction to Microprocessor

Part A

- 1.** Explain the function of ALU and IO/M signals in the 8085 architecture?
- 2.** What is a transparent latch? Why is it necessary to latch with output devices such as LED's?
- 3.** Why the number of out ports in the peripheral-mapped I/O is restricted to 256 ports?
- 4.** What are the control signals necessary in the memory mapped I/O?
- 5.** Why a latch is used for the output port and a tri-state buffer is used for the input port?

Part B

- 1.** What is Partial Decoding ? Define absolute decoding ? What is an interrupt I/O?
- 2.** What are the two modes of DMA execution?
- 3.** What is the purpose for scan section in keyboard interface?
- 4.** What is USART ? Define parallel to serial conversion?