Sai Nath University

Assignment For B.TECH in C.S Engineering 5st 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 2 long answer questions of 10 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:

- Nov-17

List Of Suggested Questions

The list of suggested questions are 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
BTCSE 501	**Operating System**
BTCSE -502	**Database Management System**
BTCSE-503	**Computer Graphics**
BTCSE -504	**Computer Organization**
BTCSE 505	**Software Engineering**

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Cover page of Assignment

ID NUMBER …….

NAME …… ……

COURSE **B.Tech**……

STREAM C.S……

SEM 5ST ……..

SUBJECT CODE ……..

SUBJECT NAME ……..

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

BTCSE 501
Operating System
Part A

1. What are the main differences between operating systems for mainframe computers and personal computers?
2. What are the three major activities of an operating system with regard to memory management?
3. What is scheduler? State and explain the various states of a process with a neat diagram?
4. What is monitor? How are monitors used in solving Dining Philosophers problem? Explain.
5. What is paging?

Part B

1. Describe Bankers Algorithm with suitable example.
2. .How to avoid dead lock. Illustrate with an example.

BTCSE 502
Database Management System

Part A

1. Draw and explain the detailed system architecture of DBMS.
2. What are the advantages of DBMS?
3. Describe the concept of client/server model
4. Write short notes on nested queries.
5. What is an objective of the normalization?

Part B

1. Explain briefly about 3NF, 4NF and BCNF with suitable examples?
2. What is Functional Dependency? Explain types and properties of FD's.

BTCSE-503
Computer Graphics

Part A

1. Write down any two line attributes
2. Differentiate window and view port
3. What are spline curves?
4. Define quadric surfaces>
5. What is animation?

Part B

1. Write down and explain the midpoint circle drawing algorithm. Assume 10 cm as the radius and co-ordinate origin as the centre of the circle

2. Differentiate parallel and perspective projections and derive their projection matrices.

BTCSE-504
Computer Organization

Part A

1. What is a stack frame? Explain its use in subroutines.

2. What is an interrupt? Explain its concepts and the hardware used to realize it.

3. Calculate the average access time experienced by a processor if cache hit rate is 0.88. miss penalty is 0.015 milliseconds and cache access time is 10 micros seconds.
4. Explain the design of a 4-bit carry - look-ahead adder.
5. Draw the circuit diagram for binary division. Explain the non-restoring division algorithm with suitable example.

Part B

1. With a general block diagram, explain the functions of each of the processor registers.
2. Highlighting important technological features and advances, explain the evolution of computer over different generations.

BTCSE-505
Software Engineering

Part A

1. What is meant by Software and Software Engineering?
2. Write short note on object oriented analysis.
3. Explain design methodologies.
4. Explain testing fundamentals.
5. What are software metrics and measurements?.

Part B

6. Explain briefly Software development lifecycle.
7. Explain about evaluation of software engineering methodologies.