Sai Nath University

Assignment For B.TECH in Civil 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
BTCE 501	**Design of RC Structures**
BTCE -502	**Foundation Engineering.**
BTCE-503	**River Engineering**
BTCE -504	**Hydropower Engineering**
BTCE 505	**Operation Research**

SAI NATH UNIVERSITY

Cover page of Assignment

ID NUMBER …….

NAME …… ……

COURSE **B.Tech**……

STREAM Civil……

SEM 5ST……..

SUBJECT CODE ……..

SUBJECT NAME ……..

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

BTCE 501
Design of RC Structures

Part A

1. What is the structural action between cantilever and counter fort type retaining wall?
2. What is the function of weep hole in retaining wall construction?
3. What are the forces acting on the domes?
4. Define yield line theory.
5. Give any four assumptions in yield line theory.

Part B

1. What are the conditions to be considered for the cylindrical tank situated
2. What is the thickness of flat slab with drops and without drops?

BTCE 502
Foundation Engineering

Part A

1. What are the factors influencing in depth of exploration of sub soil?
2. List out the various methods of site exploration.
3. Write down the components of settlement
4. Draw the pressure distribution diagram for sand and clay layer at the beneath of rigid footing.
5. What are the advantages of combined footing?

Part B

6. Write the assumptions of Coulomb's Theory.

7. Calculate the active earth pressure give that C=20 kN/m^2 and unit weight of the soil being 20 kN/m^3 for a vertical cut of depth 3 m. The soil is cohesion less soil

BTCE-503
River Engineering

Part A

1. Assume any missing data suitably, if any.
2. Use illustrations wherever required.
3. Flashy and Virgin rivers
4. Aggrading and Degrading rivers
5. Incised river stage and Boulder river stage.

Part B

1. Distinguish between bed load, suspended load and wash load. Explain with neat sketch, the saltation method of bed load transportation.
2. What do you understand by “river restoration” ? Explain the various types of restoration works.

BTCE-504
Hydropower Engineering

Part A

1. Give a detail history of hydroelectric power development in India.
2. Make a neat sketch of a hydropower plant and show clearly the various elements.

3. Describe model testing of turbines and its purpose.
4. Differentiate between firm power and secondary power.
5. Describe the basic features of the pumped storage power plant

Part B

1. What are the different methods of classifying the hydro-electric power plants? Explain them in detail.
2. What is a turbine and what are the various types of turbine? Discuss.

BTCE-505
Operation Research

Part A

1. Briefly describe the steps for solving a Transportation Problem.
2. Write short note on two person zero sums game.
3. What do you mean by crashing? Write two advantages.
4. What are the basic characteristics of a queuing system.
5. What is the importance of Poisson and Exponential distribution in Queuing theory.

Part B

1. Draw a flowchart for the computational procedure for a LPP using simplex method.
2. Explain any three applications of LPP in management.