J S University

Assignment For Diploma in CIVIL Engineering 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 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:

- Session-2019

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
DCE-41	Soil mechanics & foundation Engg
DCE-42	Building const. maint. Engg.
DCE-43	Concrete technology
DCE-44	Civil Engg. Drawing -1

Cover page of Assignment

ID NUMBER ……

NAME ……

COURSE Diploma

STREAM CIVIL……

SEM 4^{th} ……

SUBJECT CODE ……

SUBJECT NAME ……

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

Soil mechanics & foundation Engg

Assignment

SEC A

Q1. What are the various requirements for warehouse of cement?

Q.2 What is the method's of batching aggregate ?

Q.3 Define the various types of mixture.

Q4. Find out working hour required to complete a concrete slab 30*30*0.2m using 200 T mixture with 4 min. complete cycle ? (Take efficiency 90 %)

Q5. Weight of moist soil sample with containers 3 kg after over during for 24 hrs. the weight of container with soil sample remains 3 kg 198 gram . Calculate water content.

Sec B

Q1. Explain oven during method for determination of water content .

Q2. Define water cement ratio and effect of water cement ratio on physical structure of hydrated cement.

Building const. maint. Engg.

Assignment

SEC A

1. Discuss single circuit, double circuit and multiple circuit towers.

2. What are the various loads acting on towers ?

3. Write down the design principle of self-supporting steel chimney with an example, assuming suitable data

4. Explain briefly the design steps for cross girders in plate girder bridges.

5. Briefly describe the design steps of tension member.

Sec B

2 . (a) Describe the steps involved in the design of self-supported steel chimney with lining including foundation.

(b) Design a horizontal tension member carrying a load of 600 kN. The length of the member is 3 metres. The Tember is connected to 4.5 cm thick gusset plate by 20 mm rivets.

3. (a) Discuss in detail about the analysis and design of towers

.

(b) Design a rectangular pressed steel tank for a capacity of 1,50,000 litres and height of staging equal to 12 m.

Concrete technology

Assignment

SEC A Q.1 What is the physical properties of ordinary Portland cement ?

Q.2 What are the properties of plain cement concrete ?

Q.3 What are the tensile strength of concrete ?

Q.4 (a) What are the grades of steel used in R.C.C ?

(b) What are the merits and demerits of R.C.C ?

Q.5 (a) What is main function of steel in R.C.C ?

(b) Define the bending theory of beam. What assumption are taken into account ?

Part B

Q1. In working stress method , What stress are taken for different concrete grades as well as steel grades ?

Q2. What are critical and actual neutral axis in R.C.C beams and how do we find Xa and Xc ?

Civil Engg. Drawing -1

Part A

1. What is an open channel ? What are the various types of open channels ? Give examples. What causes the flow in an open channel ?

2. Derive the condition for the trapezoidal channel of best section.

3 . Derive Chezy's formula for uniform flow through a channel.

4. Obtain an expression for the depth after the 10 hydraulic jump and the loss of head due to the jump.

5. Explain the terms : hydraulic efficiency mechanical efficiency and overall efficiency.

Part B

1. How would you select a homogeneous dam depending upon the materials available ? Explain the features of a rock-fill dam with suitable sketches.

2. What are head works ? Describe the two types of canal head works ? What are the various stages of river where headworks may or may not be located ?