

J S University

Assignment For Diploma in Civil Engineering 5th 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:

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-51	Design of reinforced concrete Structure
DCE-52	Transportation Engg.
DCE-53	Estimating , costing and Value
DCE-54	Surveying-2
DC3-55	Irrigation

J S UNIVERSITY

Cover page of Assignment

ID NUMBER

NAME

COURSE Diploma Engineering

STREAM Civil.....

SEM 5th

SUBJECT CODE

SUBJECT NAME

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

Design of reinforced concrete structure

SEC A

1. Discuss reasons to provide high strength concrete and high strength steel for pre-stressed concrete structure.
2. Discuss Hoyer's method of pre-tensioning briefly. Explain utility of the method.
- 3 . Write down any three advantages of pre-stressed concrete. Also discuss three applications o
4. Discuss briefly Load Balancing concept for a pre-stressed concrete beam.
5. Discuss losses of pre-stress due to relaxation of steel and shrinkage of concrete in pre-stressed concrete structures.

Sec B

1. Why are high strength materials used in prestressed concrete ?
2. Write short notes on any two of the following :
 - (a) Short Term and Long Term Deflections for Prestressed Concrete Members
 - (b) Bearing and Bursting Tensile Stresses in End Block
 - (c) Limit State of Collapse

Transportation Engg.

SEC A

1. Write the expression for radius of a horizontal curve for the comfort condition.
2. Determine the value of radius of horizontal curve for a national highway.
- 3 . Explain aggregate impact test conducted for aggregates.
4. Explain different types of joint in concrete pavements.
5. How the requirements for the maintenance of a road are evaluated ?

Sec B

1. Discuss various parts of a harbor. Define each term used.
2. Write short notes on any four :
 - (a) Advantages and disadvantages of water transport
 - (b) Aircraft characteristics
 - (c) Marshalling yard
 - (d) Causeway
 - (e) Vertical sand drains in marshy land
 - (f) Points and crossings

Estimating , Costing and Value

Assignment

SEC A

1. Prepare analysis of rates for any two of the following :
 - (a) Cement concrete with 4 cm gauge stone ballast, coarse sand and cement in 4 : 2 : 1 proportion.
 - (b) First class brick work in Jack Arches in 1 : 3 cement and coarse sand mortar.
 - (c) First class brick work in white lime and surkhi mortar 1 : 3 in foundation and plinth.
2. Differentiate between any four of the following :
 - (a) 'Panelled door shutters' and 'wire gauzed door shutters'.
 - (b) 'Petty works' and 'Major works'.
 - (c) 'Lump-sum contract' and 'Item rate contract'.
 - (d) 'Semi-circular arch' and 'segmental arch'.
 - (e) 'Class-'A' Buildings' and 'Class-'C' Buildings'.
 - (f) 'Muster Roll' and 'Measurement Book'.
3. Write the specifications for any two of the following :
 - (a) Earth work in filling.
 - (b) Lime concrete work in buildings
 - (c) Half brick masonry
 - (d) Cement and sand mortar pointing on brick walls

Sec B

1. Write short notes on any four of the following :
 - (a) Arch work in stone masonry
 - (b) King post roofs
 - (c) Deposit works
 - (d) Item rate contract
 - (e) Pre-cast concrete work
 - (f) Various type of arches

Irrigation

SEC A

1. What is difference between Irrigation scheduling and Irrigation frequency ?
2. Explain briefly the procedure of gravel pack design for a tube well. and explain one of them in brief.
- 3 . Trace the history of development of irrigation during various plan periods since the independence of India.
4. What is difference between Void ratio and Soil porosity ?
5. What is difference between Vertical well type drop and Vertical rectangular drop ?

Sec B

1. What are the different infiltration models ? Explain in detail Horton's model.
2. Write short notes on any two of the following :
 - (a) Land levelling and grading
 - (b) Soil moisture content and degree of saturation
 - (c) Classification of canals
 - (d) India's water budget