JS University

Assignment For B.Tech Civil 6th 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:

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
BTCE-61	DESIGN OF CONCRETE STRUCTURE 2
BTCE-63	CONSTRUCTION TECHNOLOGY AND MANAGEMENT
BTCE-62	ENVIROMENTAL ENGINEERING 2
BTCE-64	ENVIRONMENTAL MANAGEMENT FOR INDUSTRIES
BTMB-61	INDUSTRIAL ECONOMICS & MANAGEMENT
BTCE-65	RURAL WATER SUPPLY AND MANAGEMENT

DESIGN OF CONCRETE STRUCTURE 2

BTCE-61

PART-A

1. A cantilever beam 4 meter long carries a gradually varying load, zero at the free end to 3 kn/m at the fixed end. draw b.m. and s.f. diagram.
2. A steel join simply supported over a span of 6 m carries a point load of 50 kn at 1.2 m from the left hand support . find the passion and magnitude of the maximum deflection. ei= 14*10 12 n-mm 2.
3. Derive the formula slope and deflections simply supported beam with a central point load?
4. Condition to overturning of the dam? condition for the stability of a dam ?
5. What is moment of resistance? do you know about the position of neutral axis? do you know about rankine' theory.

PART-B

1. Relation between slope, deflection and radius of curvature?
2. A hollow circular column having and internal diameter of 300mm and 250 mm respectively a vertical load of 100 kn at outer edge of the column. Calculate the maximum and minimum intensities of stress in the section.

CONSTRUCTION TECHOLOGY AND MANAGEMENT

BTCE-63

PART-A

1. Relation between slope, deflection and radius of curvature?
2. A hollow circular column having and internal diameter of 300mm and 250 mm respectively a vertical load of 100 kn at outer edge of the column . calculate the maximum and minimum intensities of stress in the section.
3. DO you know about column with eccentric loading?
4. Define the retaining walls.
5. Define the active earth pressure and passive earth pressure.

Part-B

1. A water tank cantains 1.3 m deep water .find the pressure exerted by the water per meter length of the tank . Take specific weight of water as 9.8 kn/m3 write the sign convention?
2. Determine the moment of inertia of a semicircular section of 100mm diameter about its centre of gravity and parallel to x x and y y axes?

ENVIROMENTAL ENGINEERING 2

BTCE-62

PART-A

1. Describe the various methods of forecasting population. Which method will be considered most appropriate for forecasting the population of cities like Delhi, Mumbai, etc? Why?
2. What is meant by hardness? Differentiate between temporary and permanent hardness.
3. What points should be considered in deciding the location of a pumping station ?
4. What are the different materials which are commonly used for water supply pipes ? Discuss their comparative merits and de
5. What are the common impurities found in natural sources of water ? Explain their effects upon its quality?

Part-B

1. A What is coagulation? What are its purposes? Explain the working of clariflocculator with a neat sketch.
2. Compare in detail the slow sand filter with Rapid sand filter.
   (a) Explain the various techniques used to remove taste and odour from water.

ENVIRONMENTAL MANAGEMENT FOR INDUSTRIES

BTCE-64

PART-A

1. What are the requirements for a stable foundation?.
2. What is the limitation of Terzaghi's analysis?
3. Define net ultimate bearing capacity. Define allowable bearing capacity.
4. Define Shallow foundation. Define Deep foundation.
5. Define differential settlement. When will the Consolidation settlement get completed?

PART-B

1. Calculate the net ultimate bearing capacity of a rectangular footing 2m x 4m in plan, founded at the depth of 1.5m below the ground surface. Load on the footing acts an angle of 15 degrees to the vertical and its eccentric in the direction of width by 15 cm. The saturated unit weight of the soil is 18 kN/m3 the rate of loading is slow and hence the effective stress shear strength parameters can be used in the analysis, c'=15 kN/m2 , ø' = 25o . Natural ground water table is at the depth of 2m below from the ground surface. Use IS 6403 (1981) recommendations.
2. Determine the ultimate bearing capacity of a strip footing, 1.5m wide, with its base at a depth of 1m, resting on a sand stratum if the ground water table is located a) at a depth of 0.5m below the ground surface, b) at a depth of 0.5m below the base of the footing. Take 3 3 o d sat =17 kN/m , =20 kN/m , =38 and c' =0. γγ φ Use Terzaghi's theory.

INDUSTRIAL ECONOMICS & MANAGEMENT

BTMB-61

PART-A

1. Is economics a science or an art?
2. Outline the main features of new industrial policy in India.
3. Discuss the causes of market failure.
4. Examine the impact of macro-economic policies on consumer behaviour.
5. Explain price determination under monopoly.

PART-B

1. Critically examine Samuel Son's Revealed Preference theory
2. Explain Bergson - Samuelson Social Welfare function.

RURAL WATER SUPPLY AND MANAGEMENT
BTCE-65

PART-A

1. Explain Epidemiological aspects of water quality method.
2. What is Specific contaminant removal system.
3. Explain Community and sanitary latrines.
4. What is septic tank.
5. What is Imhoff tank.

PART-B

1. explain Solid Waste Management.
2. Explain Disposal of Solid Waste.