Tutorials for

Contract Management
(Professional Elective II)
(3160614)

B.E. Semester 6 (Civil)

Directorate of Technical Education
Gandhinagar, Gujarat

GOVERNMENT ENGINEERING COLLEGE, DAHOD

CIVIL ENGINEERING DEPARTMENT

Certificate

This is to certify that Mr./Ms. _____ _____ Enrollment No. _____of B.E. Semester VI Civil Engineering of this Institute (GTU Code: _____)has satisfactorily completed the Assignments / Tutorial work for the subject Contract Management (3160614) for the academic year 2025-26.

Place: _____
Date: _____

Name and Sign of Faculty member **Head of the Department**

:: **VISION STATEMENT OF THE INSTITUTE ::**

To be a value-based engineering institute to disseminate globally acceptable educationand nurturing research, innovation and entrepreneurship.

:: MISSION STATEMENTS OF THE INSTITUTE ::

1. To provide quality education in the engineering disciplines through creative balance ofacademics and extracurricular programs.

2. To provide learning environment for innovation and entrepreneurship.

3. To disseminate ethical values, social values and sensitivity towardsenvironmental issues.

VISION STATEMENT OF THE CIVIL ENGINEERING DEPARTMENT ::

To be a recognized department in the field of civil engineering education to produceprofessional civil engineers, innovators and entrepreneurs for the development of the society.

:: MISSION STATEMENTS OF THE CIVIL ENGINEERING DEPARTMENT ::

1. To provide quality education to civil engineering undergraduates through creativebalance of academic, professional and extra-curricular activities.

2. To impart knowledge in the field of civil engineering for the development ofinfrastructure facilities with environmental concern for betterment of the society

3. To contribute in the nation's development through innovative ideas in the fieldof civil engineering.

Annexure I: Knowledge and Attitude Profile (WK)

1. WK1: A systematic, theory-based understanding of the natural sciences applicable to the discipline and awareness of relevant social sciences.
2. WK2: Conceptually-based mathematics, numerical analysis, data analysis, statistics and

formal aspects of computer and information science to support detailed analysis and modelling applicable to the discipline.

3. WK3: A systematic, theory-based formulation of engineering fundamentals required in the engineering discipline.
4. WK4: Engineering specialist knowledge that provides theoretical frameworks and bodies of knowledge for the accepted practice areas in the engineering discipline; much is at the forefront of the discipline.
5. WK5: Knowledge, including efficient resource use, environmental impacts, whole-life cost, re-use of resources, net zero carbon, and similar concepts, that supports engineering design and operations in a practice area.
6. WK6: Knowledge of engineering practice (technology) in the practice areas in the engineering discipline.
7. WK7: Knowledge of the role of engineering in society and identified issues in engineering practice in the discipline, such as the professional responsibility of an engineer to public safety and sustainable development.
8. WK8: Engagement with selected knowledge in the current research literature of the discipline, awareness of the power of critical thinking and creative approaches to evaluate emerging issues.
9. WK9: Ethics, inclusive behavior and conduct. Knowledge of professional ethics, responsibilities, and norms of engineering practice. Awareness of the need for diversity by reason of ethnicity, gender, age, physical ability etc. with mutual understanding and respect, and of inclusive attitudes.

:: PROGRAM OUTCOMES (POs) :: as per the *new NBA (National Board of Accreditation, India) guidelines* under the Revised SAR 2025 / GAPC v4.0 framework

1. PO1: Engineering Knowledge: Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4
2. PO2 – Problem Analysis Identify, formulate, review research literature, and analyze complex engineering problems to reach substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. PO3: Design/Development of Solutions: Design creative solutions for complex engineering

problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required. (WK5)

4. PO4: Conduct Investigations of Complex Problems: Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions. (WK8).
5. PO5: Engineering Tool Usage: Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems. (WK2 and WK6)
6. PO6: The Engineer and The World: Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment. (WK1, WK5, and WK7).
7. PO7: Ethics: Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9)
8. PO8: Individual and Collaborative Team work: Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.
9. PO9: Communication: Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences
10. PO10: Project Management and Finance: Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.
11. PO11: Life-Long Learning: Recognize the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change. (WK8)

Course Outcomes (COs):

(1) Decide suitable contracts for a given project scenario and stakeholders of contract.
(2) Judge best form of contract for a specific project and design performance parameters.
(3) Summarize tender processing and assess various contractual provisions in tender documents and develop bidding strategy.
(4) Formulate contract management processes involved in construction projects.

Sr. No.	Objective(s) of Tutorial	CO1	CO2	CO3	CO4
1.	Collection of Evaluation of tender notices/ EOI, RFQ & RFP	✓	✓	✓	
2.	Tender notice preparation		✓	✓	
3.	Exercise on pre-qualification of contractors	✓	✓	✓	✓
4.	Case Study & evaluation of tender documents for:				
	• Tendering process			✓	
	• Security and performance bonds				✓
	• Risk assessments of contractual provisions		✓		✓
	• Arbitration/dispute resolution		✓		✓

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(Progressive Assessment Sheet)

Sr. No.	Objective(s) of Tutorial	Page No.	Date of performance	Date of submission	Assessment Marks	Sign. of Teacher with date	Remarks
1.	Collection of Evaluation of tender notices/ EOI, RFQ & RFP		12-Jan-26				
			19-Jan-26				
			2-Feb-26				
2.	Tender notice preparation		9-Feb-26				
3.	Exercise on pre-qualification of contractors						
4.	Case Study & evaluation of tender documents for:						
	• Tendering process						
	• Security and performance bonds						
	• Risk assessments of contractual provisions						
	• Arbitration/dispute resolution						
Total							

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BE-VI 6th SEMESTER

CONTRACT MANAGEMENT **3160614**

Tutorial 01 Collection of Evaluation of tender notices/ EOI, RFQ & RFP

CO- 1, 2, 3

1. Search tender notice of the following items (a to r) (Batch1 – a to f, Batch 2- g to l. Batch 3 m to r) from newspaper / online websites and stick it. Compare one tender notice with all other types of tender notice in tabular form(as given below)

Sr.No	Type of work	Authority	Estimated cost	EMD Amount and % to Estimated cost	SD Amount and % to Estimated cost	Project duration	Submission duration (purchase date – submission date)	Pre-bid duration (purchase date – Pre-bid date)	Type of contract
1	a)Construction of Bridge	NHAI							

a) Construction of Bridge.

b) Construction of Highway.

c) Construction of Building.

d) Construction of Refinery work.

e) Construction of Metro train.

f) Construction of Bullet train.

g) Construction of Dam.

h) Fabrication work

i) Survey work

j) Construction of retaining wall

k) Construction of power plant

l) Construction of Tunnel

m) Construction of Box culvert

n) Construction of interior work

o) Construction of Sewage treatment plant.

p) Construction of Effluent treatment plant.

q) Jetty Construction.

r) Construction of crude oil terminal.

2. Explain in detail for following terminology a) EOI b) RFQ c) RFP.
3. Search tender notice having EOI, RFQ, and RFP for any type of construction from a newspaper / online site and stick it.
4. Differentiate between a) EOI and RFP b) RFP and RFQ c) EOI and RFQ
5. Enlist the different e-procurement service provider websites as per the following bifurcation a) Gujarat b) National c) Global.

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Tutorial 02 Tender notice preparation

CO- 2, 3

1. What is Notice inviting Tender?
2. Write down a Notice inviting tender for the following (Assume suitable data)
   a) Construction of G+ 5 story Commercial building having shops, multiplex, and offices with an estimated cost of 15cr
   b) Construction of Rail over bridge having estimated cost 10cr
   c) Construction of Jetty at Kandala port with an estimated cost of 20cr
   d) Construction of Check dam near your house having estimated cost of 7lac
   e) Construction of Gas based power plant at Dahej with an estimated cost of 100cr.

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Tutorial 03 Exercise on pre-qualification of contractors

CO-1, 2, 3, 4

1. Enlist the different class of contractors and write down their eligibility criteria.
2. What are the parameters considered during the pre-qualification of the contract?
3. What is a valid contract as per the Indian Contract Act 1872?
4. Enlist the problems that occurred during the contract.
5. Explain in brief (i) Open tender and (ii) Selected or limited tender
6. Explain different parties in a contract. What are the rights and duties of each party?
7. Prepare a list of contract documents.
8. What are the characteristics of a good contract?
9. Explain the elements of contract management.
10. Explain the process of tendering.
11. Prepare a list of types of contracts and explain it with their merits and demerit of each.
12. Explain HAM, EPC, and all type of PPP model (BOT, BOOT, BOLT etc) contracts.
13. Write common contract clauses.
14. Draft typical clauses for delay, penalty, and liquidated damages.
15. Write a short note on “Force Majeure”

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Tutorial 04 Case Study & evaluation of tender documents for

CO- 2, 3, 4

4a.Tendering process

1. Write down types of contracts and Explain all in detail with merit and Demerits.
2. Explain the procedure of tender evaluation.
3. Compare NHAI and R& B tender documents and enlist the dissimilarity.
4. Take the tender of GWSSB / smart city / Irrigation department and explain the following terms from EMD b) SD c) Tender cost d) GCC e) SCC
5. Explain with reason "HAM model is failed in NHAI. While HAM is better for UP Jal Nigam work."
6. Enlist the evaluation criteria for 1) Item rate contract, and 2) BOOT.

4b. Security and performance bonds

1. Explain about conditions of payment and time delay.
2. Explain the following terms

a. EMD
b. Security Deposit
c. Bank Guarantee
d. Performance Bond
e. Unbalance Tender
f. Defect liability period

4c.Risk assessments of contractual provisions

1. Write a short note on contract risk management.
2. Make a risk assessment chart for any one tender document.
3. Explain about the circumstances under which a contract can be terminated

4d. Arbitration/dispute resolution

1. What is the root cause of conflict in contract? Enlist the problem that occurred during the contract
2. Who is an arbitrator? What are the qualifications of the arbitrator? State the situation under which the need of an arbitrator arises.
3. State with illustrations, legal requirements for a valid tender
4. Explain about various means of dispute resolution
5. Explain about the clause of termination of the contract.
6. What are the advantages of alternative dispute resolution (ADR) over legal proceedings in a court?
7. Which factors should be considered to avoid disputes in a contract?
8. Under which conditions a tender is rejected