

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- 2026

M.Tech-II Semester (CM)

COURSE CODE (CREDITS): 10M11CE211 (3)

MAX. MARKS: 35

COURSE NAME: CONSTRUCTION CONTRACTS AND LAWS

COURSE INSTRUCTORS: DR. SAURAV

MAX. TIME: 2 Hours

Note: (a) All questions are compulsory.

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

(c) Use of Non programmable calculator is allowed.

Q.No	Questions	CO	Marks
Q1	A government agency awarded a highway construction contract to a contractor under standard bidding procedures. During execution: - The contractor delayed completion by 6 months due to poor resource management. - The employer imposed liquidated damages and withheld 30 lakh from the contractor's payment. - Meanwhile, a site accident occurred due to lack of safety measures, resulting in the death of a worker. - Environmental violations were also reported due to improper disposal of construction waste. (a) Identify and classify the legal issues involved under civil law and criminal law. Justify your classification with reasons. (b) Evaluate the liabilities of the contractor and the possible legal consequences under Indian law.	3	5
Q2	A contractor is executing a metro construction project in a densely populated urban area. During execution: - Continuous dust and noise from the site affected nearby shopkeepers and residents. - A pedestrian was injured due to falling debris from the construction site. - Unauthorized entry of local people into the site led to disputes regarding trespass. - The contractor was selected through an open tender as the lowest bidder (L1), but later it was found that the contractor lacked adequate safety systems and experience. - The tender evaluation committee is now under scrutiny for improper evaluation and lack of proper documentation. (a) Analyze the applicability of tort law (negligence, nuisance, and trespass) in the above situation. Explain how the contractor can be held liable even in the absence of a direct contract with affected third parties. (b) Evaluate the role of safety obligations and professional liability of engineers and contractors in preventing such incidents. What records should be maintained to prove "reasonable care"?	3	5
Q3.	A State Highway Authority intends to award a ₹450 crore bridge construction project. The departmental estimated cost is ₹420 crore. After prequalification and technical evaluation, two bidders qualify:	1	10

	<table><tr><th>Parameter</th><th>Bidder A (L1)</th><th>Bidder B (L2)</th></tr><tr><td>Bid Amount</td><td>₹360 crore</td><td>₹405 crore</td></tr><tr><td>Past Performance</td><td>Poor (multiple disputes, safety violations)</td><td>Very Good (timely completion record)</td></tr><tr><td>Technical Score (out of 100)</td><td>60</td><td>88</td></tr><tr><td>Probability of timely completion</td><td>50%</td><td>80%</td></tr></table>	Parameter	Bidder A (L1)	Bidder B (L2)	Bid Amount	₹360 crore	₹405 crore	Past Performance	Poor (multiple disputes, safety violations)	Very Good (timely completion record)	Technical Score (out of 100)	60	88	Probability of timely completion	50%	80%		
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	If the project is delayed or fails, the authority estimates an additional burden of ₹120 crore due to escalation, litigation, and socio-economic losses. (a) Calculate the expected total project cost for both bidders considering the probability of successful and delayed completion. (b) Based on expected cost, technical score, and risk factors, recommend the most appropriate bidder with justification. (c) Determine whether Bidder A qualifies as an abnormally low bidder, if the threshold is 15% below the estimated cost. (d) Analyze how poor past performance and safety violations can lead to contractual disputes and tort liability during project execution																	
Q4.	A contractor has raised a claim of ₹12 crore against a government agency for delay and additional work. The dispute can be resolved either through arbitration or litigation. <table><tr><th>Parameter</th><th>Arbitration</th><th>Litigation</th></tr><tr><td>Probability of success</td><td>75%</td><td>55%</td></tr><tr><td>Time for resolution</td><td>2 years</td><td>6 years</td></tr><tr><td>Legal cost</td><td>₹20 lakh</td><td>₹50 lakh</td></tr></table> The applicable discount rate is 10% per annum. (a) Compute the expected value of claim recovery for both arbitration and litigation. (b) Calculate the present value (PV) of expected recovery under both options. (c) Determine the expected net benefit after deducting legal costs. (d) Recommend the most suitable dispute resolution mechanism based on financial analysis and time value of money. (e) From a construction contract and legal perspective, discuss: i. Why arbitration is generally preferred in construction disputes ii. Risks associated with prolonged litigation	Parameter	Arbitration	Litigation	Probability of success	75%	55%	Time for resolution	2 years	6 years	Legal cost	₹20 lakh	₹50 lakh	2	10			
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Q5.	A contractor entered into an agreement with a government agency to construct a bridge within 18 months. Due to continuous floods and a sudden change in environmental regulations, the contractor failed to complete the work within the stipulated time. The agency terminated the contract and demanded compensation for delay. Based on the provisions of the Indian Contract Act, 1872, analyze whether the contractor can claim discharge of contract due to impossibility of performance. Discuss the legal remedies available to both parties.	2	5															