•
Δ
$\Box$

Reg. No.:						

## **Question Paper Code: U1206**

## B.E. / B.Tech DEGREE EXAMINATION, NOV 2023

	-	5.2., 5.1 <b></b>	22 212 21 21 21 21 21 21 21 21 21 21 21	, = 0 = 0		
		Profession	al Elective			
		Civil En	gineering			
	21CEV20		NSTRUCTION TECHNO	IQUES		
Dura	ation: Three hours	, -		Maximum: 10	00 Marks	
		Answer AL	L Questions			
		PART A - (10	x 1 = 10  Marks			
1.	Which of the following	ng is typically NOT a	component of the substru	cture?	CO1- U	
	(a) Footings	(b) Columns	(c) Roof trusses	(d) Piers		
2.	2. What type of foundation is often used in areas with expansive clay soils to prevent structural damage?					
	(a) Slab-on-grade		(b) Pile foundation			
	(c) Caisson foundatio	n	(d) Strip foundation			
3.	Vacuum dewatering h floors?	nelps in reducing which	ch common issue in concr	rete	CO1- U	
	(a) Cracking	(b) Erosion	(c) Scaling	(d) Curing	g	
4.	What is the primary c	hallenge in erecting to	all structures?		CO1- U	
	(a) Finding enough co	onstruction workers				
	(b) Managing constru	ction costs				
	(c) Dealing with wind	l loads and structural	stability			
	(d) Obtaining constru	ction permits				
5.	Which construction in the assembly of pre-in		sed for special structures e construction site?	that involve	CO1- U	
	(a) Cast-in-place cons	struction	(b) Modular constructi	ion		
	(c) Traditional mason	rv	(d) Timber framing			

0.	structure construction?	special	CO1- U			
	(a) Availability of materials					
	(b) Aesthetics					
	(c) Cost-effectiveness					
	(d) Architectural design and engineering requirements					
7.	Which type of material is commonly used in the externally bonded reinforcement technique for strengthening structures?					
	(a) Wood (b) Plastic					
	(c) Fiber-reinforced polymers (FRP) (d) Glass					
8.	What is the primary purpose of subgrade waterproofing in construction?		CO1- U			
	(a) To enhance structural integrity					
	(b) To provide insulation					
	(c) To prevent moisture infiltration					
	(d) To improve aesthetics					
9.	Which of the following is NOT a common method used in building demolition?		CO1- U			
	(a) Implosion (b) Wrecking ball (c) Controlled collapse	(d) Eleva	ation			
10.	What is building demolition?		CO1- U			
	(a) The construction of a building					
	(b) The renovation of a building					
	(c) The process of tearing down a building					
	(d) The maintenance of a building					
	$PART - B (5 \times 2 = 10 Marks)$					
11.	What is the substructure in construction?		CO1- U			
12.	What are some potential challenges or limitations of vacuum dewatering	ıg?	CO1- U			
13.	. What is the general construction sequence for skyscrapers?					
14.	What are the key considerations for a successful underpinning project?		CO1- U			
15.	Enlist various demolition methods.		CO1- U			
	$PART - C (5 \times 16 = 80 Marks)$					

16.	(a)	Explain in detail about Pipe Jacking & Box Jacking construction methodologies.	CO1 U	(16)
		Or		
	(b)	What are the various Tunneling & Piling techniques used in construction?	CO1- U	(16)
17.	(a)	Explain with neat sketch about vacuum dewatering of concrete flooring.	CO1- U	(16)
		Or		
	(b)	Discuss in details about Concrete paving technology	CO1- U	(16)
18.	(a)	What are the points to be considered in the erection of a lattice tower?	CO1- U	(16)
		Or		
	(b)	What are the various support structure for heavy equipment and machinery in heavy industries?	CO1- U	(16)
19.	(a)	Elaborate on various techniques used for foundation repair and stabilization.	CO1- U	(16)
		Or		
	(b)	How would you strengthen a slab? Explain various common methods.	CO1- U	(16)
20.	(a)	Explain various techniques that used to evaluate the building without damaging it.	CO1- U	(16)
		Or		
	(b)	Enumerate the considerations before doing a demolition process.	CO1- U	(16)