JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT TEST -3 EXAMINATION- 2025

B.Tech-VI Semester (CE)

COURSE CODE (CREDITS): 18B1WCE631

MAX. MARKS: 35

COURSE NAME: ADVANCED STRUCTURAL ANALYSIS

COURSE INSTRUCTORS: Mr. Chandra Pal Gautam

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

Q.No	Question	T A	
Q1	(i) Write down the steps followed in Fig. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	CO	Mark
ζ.	(i) Write down the steps followed in Finite Element Method analysis.	CO4	2+2+2
	(ii) Explain how Stadd Pro and Ansys software are different in term analysis of a structural problem.		=6
	(iii) Explain the educators of all iii 1 i 5		
	(iii) Explain the advantage of plastic analysis. Draw the stress diagram		
	and write moment carrying capacity of different stages of plastic analysis.		
Q2			
Q2	Solve the given truss and find the support reaction by using stiffness	CO5	8
	I III AITIX MEINOO		
	B > 20 KN		
	/ :4m		
	A 3m 3m 000 C		
0.0	The state of the s		
Q3	Solve the given beam by using stiffness matrix method.	CO5	7
	, 100 KM		,
	2 2m Da 2m 220KHM		
	2 2m Ood 2m 20KNM		
Q4	For the given cross section of beam, find the plastic section modulus.	CO4	7
		004	,
	20 mm		
or and a second	100 mm	igent controls	
6	100 mm		
Sec. All	1 20 mm		
	+ + 100mm		
Q5	For the given been find the call and the call	004	ene .
	and the correspondent which plastic moment is Mp.	CO4	7
	1 2 W		
	12W 12 600 4 4 600.		
	111 /2 /2 000 /2 /2 000.		
10 10	AND ADDRESS OF THE CONTROL OF THE PROPERTY OF		and the same
			125.40