BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)

CLASS: B.TECH **SEMESTER: IV**
BRANCH: CIVIL **SESSION : SP/2020**

SUBJECT: CE207 STRUCTURAL ANALYSIS II

TIME: 2 HOURS **FULL MARKS: 25**

INSTRUCTIONS:
1. The total marks of the questions are 25.
2. Candidates may attempt for all 25 marks.
3. Before attempting the question paper, be sure that you have got the correct question paper.
4. The missing data, if any, may be assumed suitably.

				CO	BL
Q1	(a)	Write the determinacy of fixed beam.	[2]	CO1	LEVEL3
Q1	(b)	What do you mean by force method and displacement method?	[3]	CO1	LEVEL4
Q2		Compute the vertical reaction at roller support of the system shown in fig.1 by flexibility method. Assume EI is unity.	[5]	CO3	LEVEL3

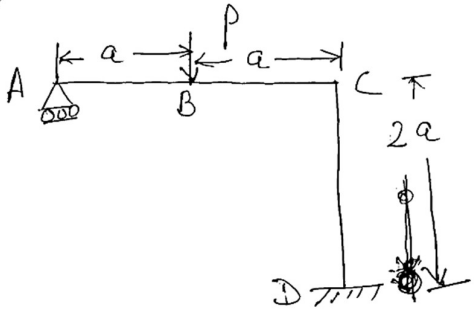

FIG. 1

Q3		Determine the influence line for RA for continuous beam shown in fig.2 compute the ordinates at 1m interval.	[5]	CO5	LEVEL5

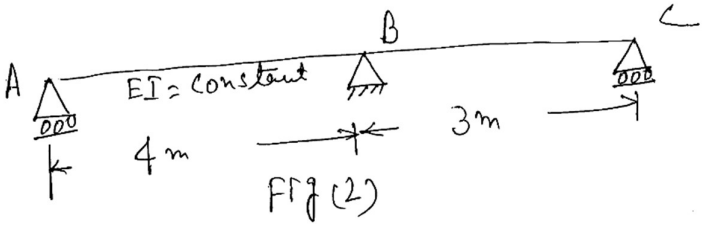

Fig (2)

Q4	(a)	Which parameters are to be taken into account to determine Degrees of freedom?	[2]	CO1	LEVEL1
Q4	(b)	What are the degrees of freedom of the structures shown in fig.3 (a) & (b)	[3]	CO1	LEVEL3

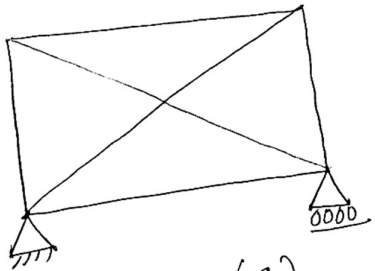

Fig (3) (a)

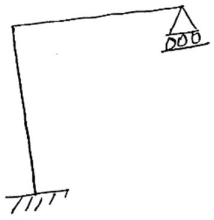

Fig (3) (b)

PTO

Q5 Determine end moments of the structure shown in fig.4 using slope deflection method. [5] CO5 LEVEL3

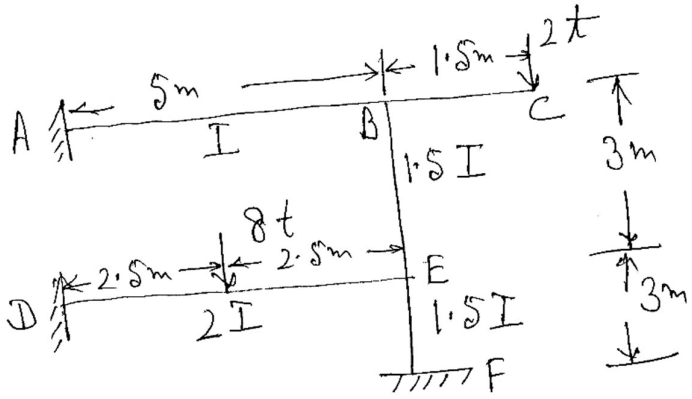

Fig (4)

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