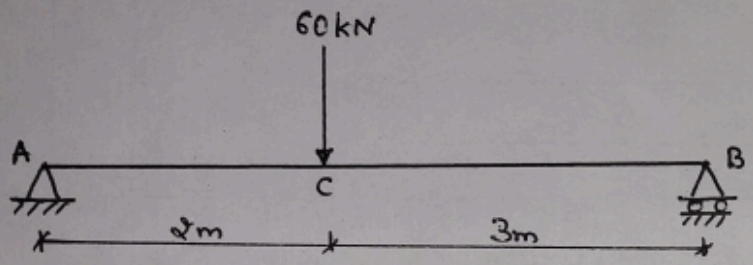
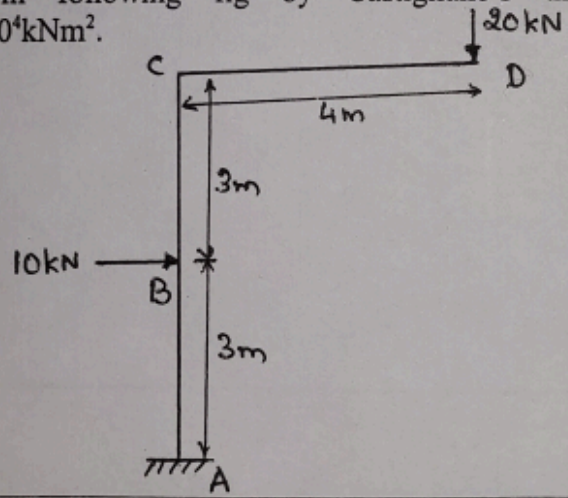
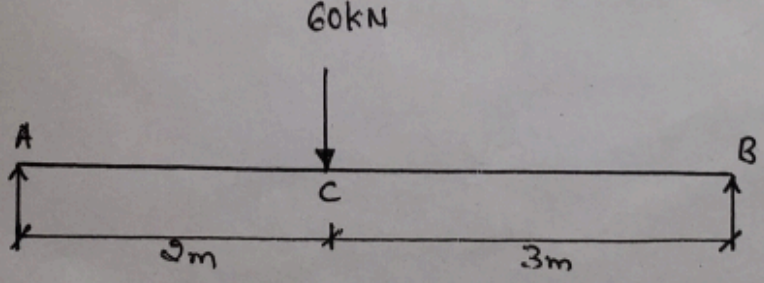
Vivekananda College of Engineering & Technology,Puttur
[A Unit of Vivekananda Vidyavardhaka Sangha Puttur ®]
Affiliated to VTU, Belagavi & Approved by AICTE New Delhi

CRM08	Rev 1.10	<Civil>	<26/07/2022>

CONTINUOUS INTERNAL EVALUATION- 2

Dept: CV	Sem / Div: 4th	Sub: Analysis of Determinate Structures	S Code: 18CV42
Date: 03/08/2022	Time: 3:00-4:30 pm	Max Marks: 50	Elective: N
Note: Answer any 2 full questions, choosing one full question from each part.			

QN		Questions	Marks	RBT	COs
		PART A			
1	a	A simply supported beam AB of span 5m is shown in following fig. Calculate the deflection under the point load by the strain energy method. Take EI=6000kNm^2. 	15	L3	CO4
	b	Derive the equation for strain energy due to axial load and bending.	10	L2	CO4
		OR			
2	a	Determine the horizontal deflection at point D for the bent frame shown in following fig by Castigliano's theorem. Assume EI=16x10^{4}kNm^2. 	15	L3	CO4
	b	Determine the deflection under the load point of the beam shown in following figure. Take EI=2800kNm^2. Use unit load method. 	10	L3	CO4

Prepared by:Mr. Shishirakrishna S.

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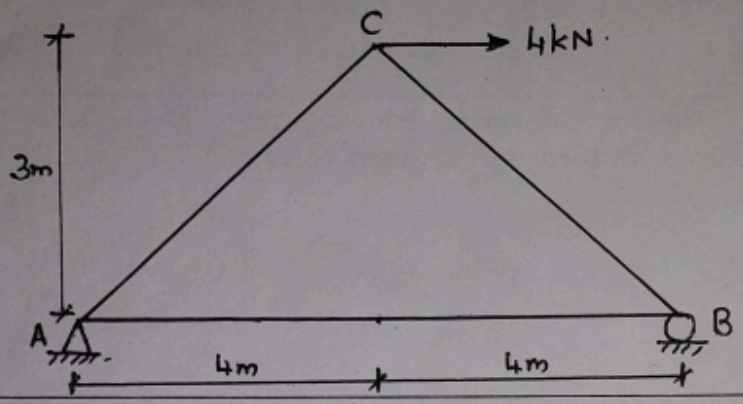
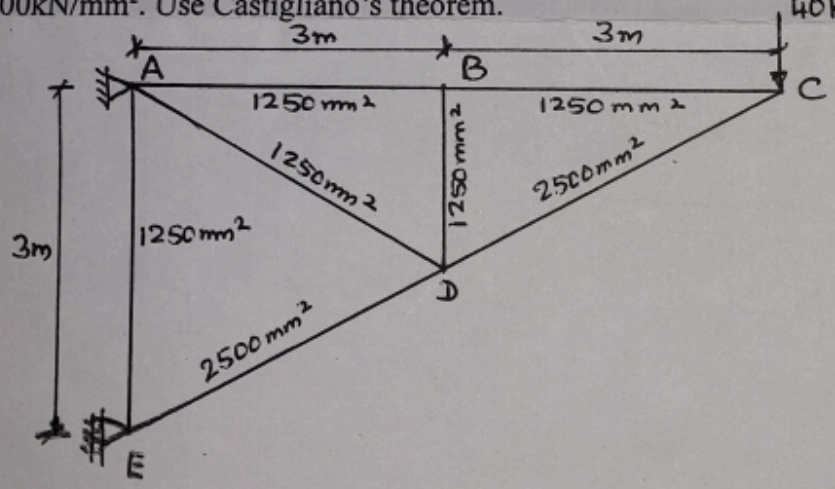
PART B

3	a	The cross sectional area of each member of the truss is shown in following fig. A=400mm² and E=200GPa. Determine the vertical deflection at joint C if a 4kN force is applied to the truss at C. 	25	L3	CO3

OR

4	a	The cross sectional area of the members of the truss is as indicated in the following fig. Find the vertical deflection of joint C. Take E=200kN/mm². Use Castigliano's theorem. 	25	L3	CO4