

YTU – Department of Civil Engineering – Structural Engineering Division Structural Analysis II – Homework 2

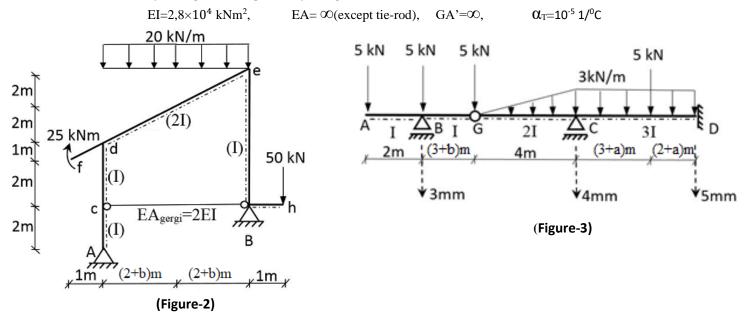
Release Date:27.11.2020 Hour:17.00 **Delivery Date:**01.12.2020 Hour: 17.00

Student Number:									
	Α	В	С	D	Ε	F	G	Н	
$a = 0.2 \times (B+H) + 0.3 \times (E+G+H)$ b				$b = 0.2 \times (B+G) + 0.3 \times (D+G+H)$					

Homework 2:

- a) Draw the bending moment (M) and shear force (V) diagrams due tothe given externalloads,
- b) Draw bending moment (M) diagram due to 5 cm vertical settlementand 2/1000 rad rotation in clockwise of support A, 2 cm vertical settlement of support B (movements of support A and B are simultaneous)
- c) Calculate the support reactions for only the tie-rod is exposed to uniform temperature changet⁰=-15°C,

of the system given in Figure-2by using Force Method.



Homework 3: For the system shown in Figure-3,

- a) Draw M, V diagrams due tothe given external loads and check the moment diagram of the statically indeterminate structure if it is correct
- **b)** Draw **M** diagram in case of support settlements
- c) Estimate the rotation at point A due to the given external loads

of the system given in Figure-3by using Force Method.

(EI= 3×10^4 kNm², EA= ∞ ve GA'= ∞)

NOTE:

- Send your solutions to (ytu2021yapistatigi2@gmail.com)mail address until 01.12.2020 17.00 a.m. with PDF file. The name of the file should be as "student number_name_surname_group no_HW2"
- The homework that is sent after the delivery date (01.12.2020 Hour: 17.00 a.m) and hour will not be evaluated.
- This worksheet has been prepared to provide a better understanding of the topics in the coursein case of insufficient practice due to the time limitation of the course. When preparing your homework, it is recommended to you that discuss and evaluate the related questions after the courses. It is clear that you will be more successful if you take this suggestion into consideration.
- All units are kN and m.
- Drawings and calculations must be clearly written with pencil.
- Please prepare the cover page according to Thesis Writing rule. Homework cover page which has not been prepared according to thesis writing rules will not be evaluated.