B.E. VI SEM, FIRST INTERNAL (CIE-I),JUNE- 2024
DEPARTMENT OF MECHANICAL ENGINEERING

SUBJECT CODE :PC231ME_____   **SUBJECT: MOM**

TIME: 1:00 HOUR   **MAXIMUM MARKS : 20**   **Date :**
_21_/06/2024FN

PART-A   **ANSWER ALL QUESTIONS**   **MARKS: 3 X 2 = 6**

Q.No.	Questions	BTL	CO(S)	PO (S)	PSO
1.	Define stress ?explain types of stress	1	1	1	-
2.	State Hooke's Law.	1	1	1	-
3.	what is the relation between shear force and bending moment	2	2	1	-
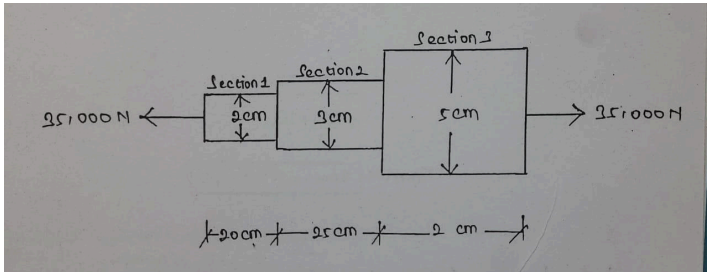
PART-B   **ANSWER ANY TWO QUESTIONS**   **MARKS: 2 X 7 = 14**

Q.No.	Questions	BTL	CO(S)	PO (S)	PSO
1	A Tensile test was conduction on a mild steel bar. The following data obtained from the test.Diameter of the steel bar = 3cm ,Gauge length of the bar = 20cm,Load of Elastic limit = 250KN,Extension at a load 150KN = 0.21mm,Maximum load = 380KN,Total extension = 60mm,Diameter of the rod at the failure = 2.25,Determine : 1) Young's modulus. 2) The stress at	5	1	2	1

	Elastic limit. 3) The percentage elongation. 4) The percentage decrease in area.				
2	The safe stress, for a hollow steel column, which carries an axial load of 2.1×10^3 KN is 125MN/m^2 if the external diameter of the column is 30cm. Determine the internal diameter.	5	1	2	1
3	An axial pull of 35000N is acting on a bar consisting of three length as shown in figure if the young's modulus = 2.1 x 10^5 N/mm^2 Determine a) Stress in each section.b) Total extension as the bar.	5	2	2	1