Total No. of Pages:01 — 95 —

VI SEMESTER **B.Tech.**

MID SEMESTER EXAMINATION *MARCH-2019*

CE-302 Analysis of Indeterminate Structures

Time: 1:30 Hours *Max. Marks : 25*

Note: Answer all questions
Assume suitable missing data, if any.

Q1 A continuous beam ABCD, 12m long is fixed at A and D, and is loaded as shown in Fig 1. Analyse the continuous beam by **Slope Deflection Method** is (i) The end A yields through 1/250 radians in clockwise direction (ii) End B sinks 30mm in downward direction (iii) End C sinks 20mm in downward direction. Take I = 38.20 X 10^5 mm^4 and E = 2 X 10^5 N/mm^2.. 05

Q2 Analyse the frame as shown in Fig 2 by **Slope Deflection Method.** 05

Q3 Analyse the frame as shown in Fig 3 by **Moment Distribution Method.** 05

Q4 Determine the redundant reaction at support B in the beam as shown in Fig 4 by **Castigliano's Theorem.** 05

Q5 Analyse the frame as shown in Fig 5 by **Method of Consistent Deformation** taking the horizontal reaction at D as Redundant. 05

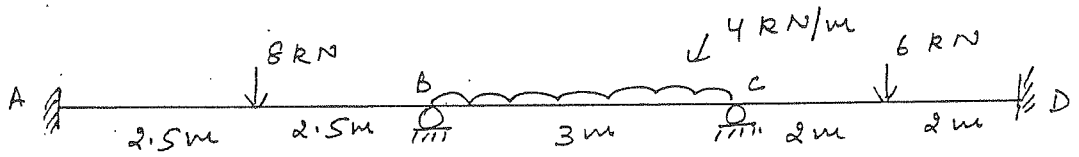

FIG 1

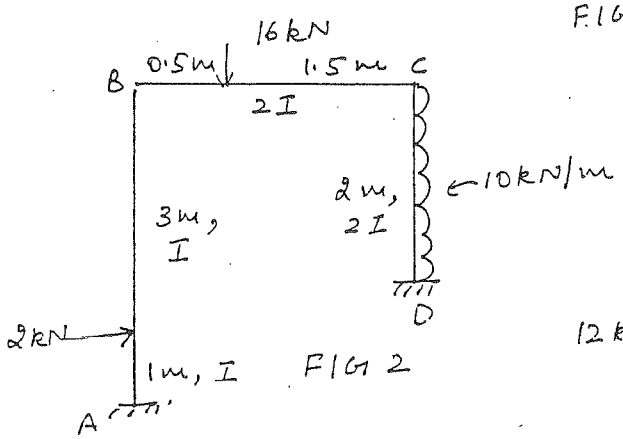

FIG 2

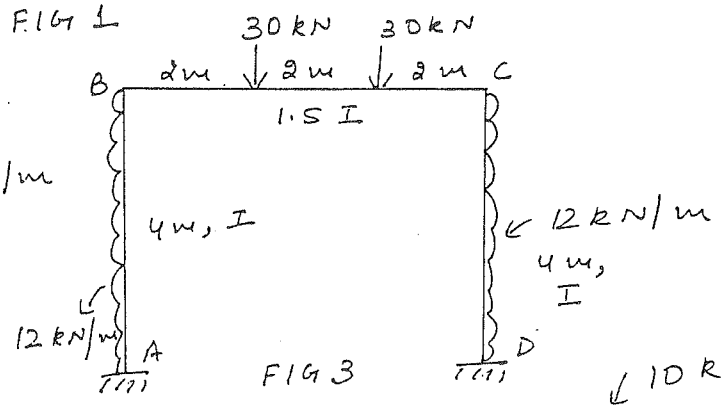

FIG 3

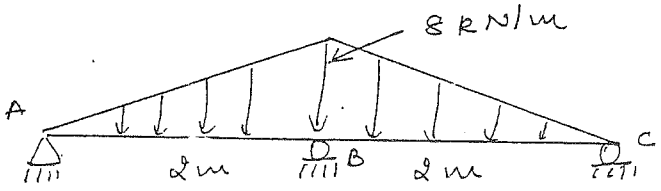

FIG 4
EI is constant

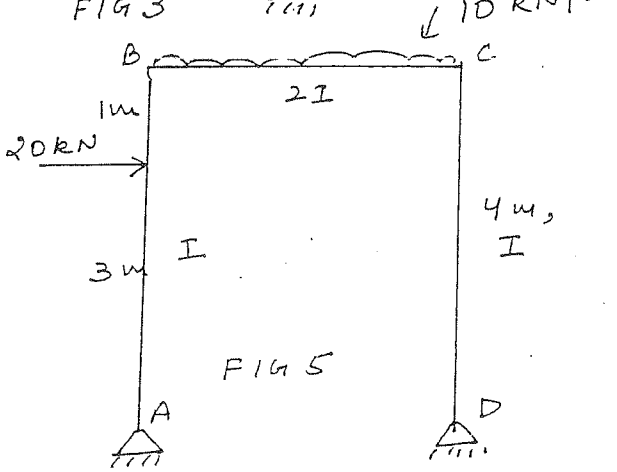

FIG 5