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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

MID TERM TEST

SUMMER SEMESTER - JUNE 2018

B.Tech 2nd Semester

COURSE CODE: 10B11CE211

MAX. MARKS: 50

COURSE NAME: ENGINEERING MECHANICS

COURSE CREDITS: 04

MAX. TIME: 2 Hrs

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

Q1. Find the force in the member CF of the truss loaded and supported as shown in the Fig. 1 using method of section. (10)

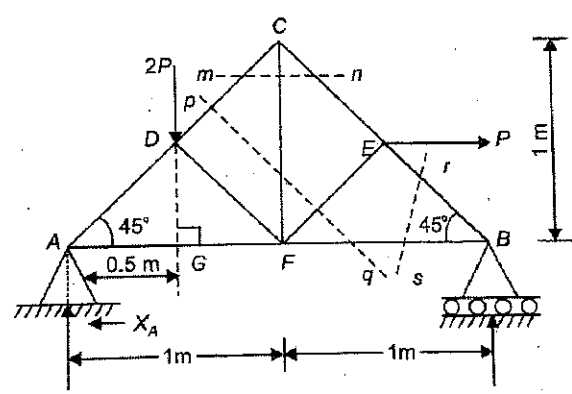


Fig. 1

Q2. Fig. 2 shows a truss of seven members each of length 3m and freely supported at its ends. Find the forces in all the members of the truss and indicating its nature in a tabulated form. (10)

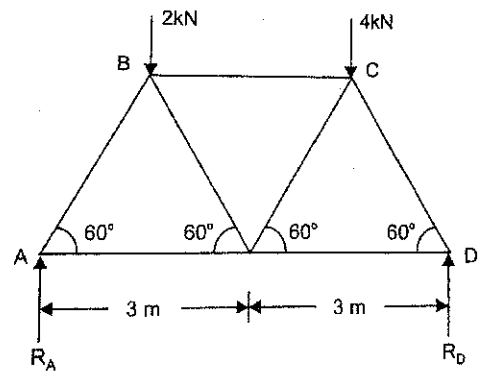


Fig. 2

Q3. A simply supported beam 6m long is carrying a uniformly distributed load of 5kN/m over a length of 3m from right end. Draw SFD and BMD for the diagrams for the beam and also calculate maximum BM on the section. (10)

Q4. Draw the SFD and BMD diagrams for the beam as shown in the Fig. 3 (10)

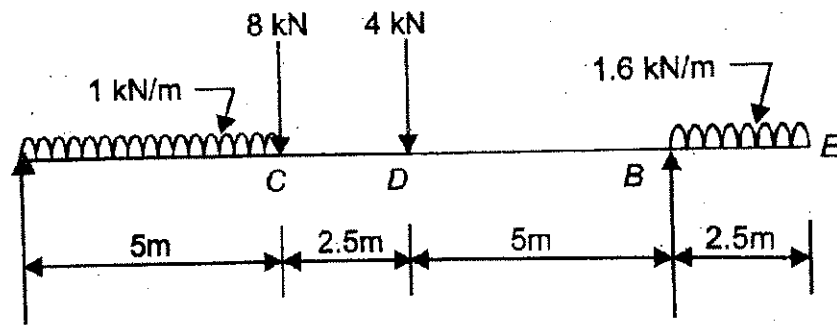


Fig. 3

Q5. A beam AB of span 6m is loaded as shown in the Fig 4. Determine the reactions at A and B. (10)

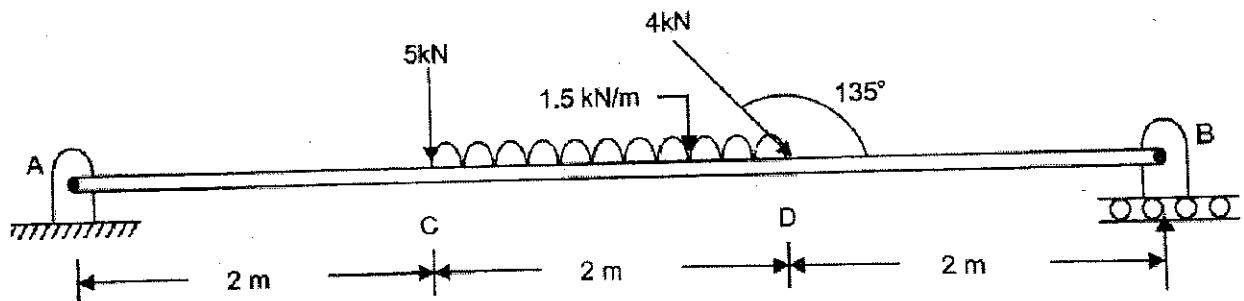


Fig. 4