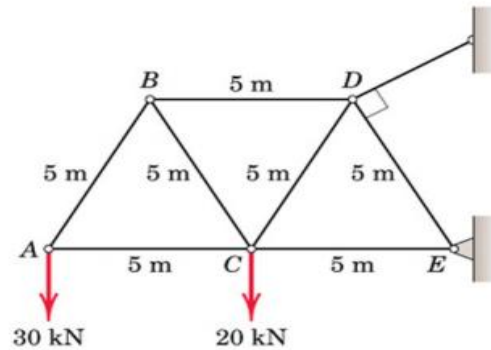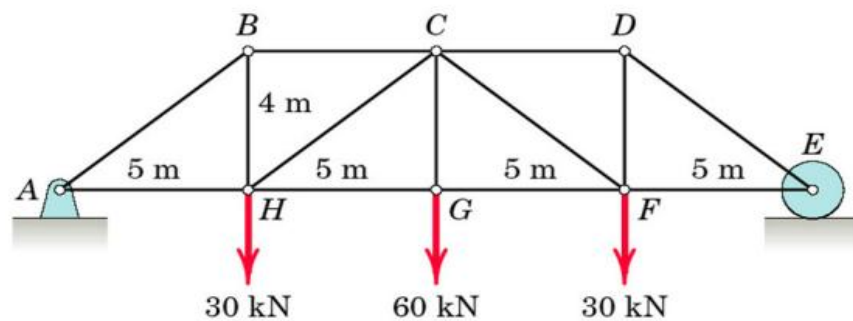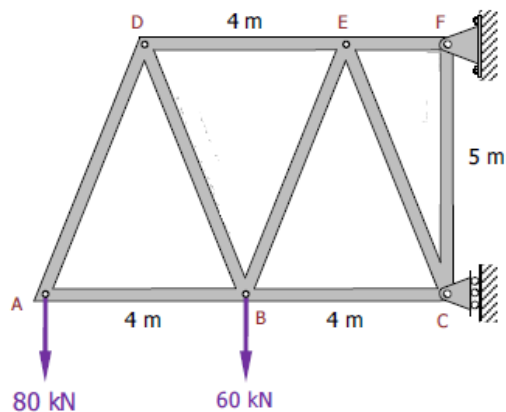1. **Calculate**the forces in each member of the loaded truss shown in Fig. (CO-1) (Unit-I) (Level-3)
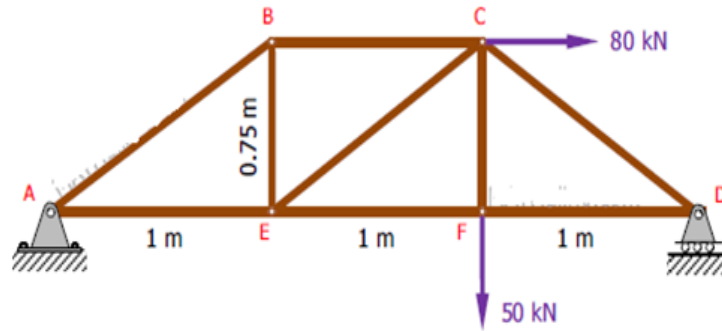

2. **Analyze** truss shown in Fig.(CO-1) (Unit-I) (Level-4)

3. The truss in Fig. below is pinned to the wall at point F, and supported by a roller at point C. **Calculate** the force (tension or compression) in members BC, BE, and DE.(CO-1) (Unit-I) (Level-3)

4. From the truss in Fig.below, **solve** the force in members BC, CE, and EF.(CO-1) (Unit-I) (Level-3)

5. A motorist is travelling at 90 kmph, when he observes a traffic light 250 m ahead of him turns red. The traffic light is timed to stay red for 12 sec. If the motorist wishes to pass the light without stopping, just as it turns green. **Solve** i) the required uniform deceleration of the motor, and ii) the speed of the motor as it passes the traffic light.
(CO-2) (Unit-II) (Level-3)

6. A train travelling with a speed of 90 kmph slows down on account of work progress, at a retardation of 1.8 kmph per second to 36 kmph. With this, it travels 600 m. Therefore it gains further speed with 0.9 kmph per second till getting original speed. **Calculate** the delay caused. (CO-2) (Unit-II) (Level-3)