Q 1: (7 marks)

Replace the distributed loading by an equivalent resultant force and specify its location, measured from point (A).

Solution:
Q 2 (7 marks):

For the beam ABC shown in figure, determine the reactions at the supports (B) and (C). Neglect the weight and the thickness of the beam.

**NOTE:**
B – Roller
C – Pin (Hinge)

**Solution:**
Q 3 (6 marks):

If the force in cable (AB) is (900 N). Determine the moment of this force about point (O). Express the result in Cartesian form \((i, j, k)\).

Solution: