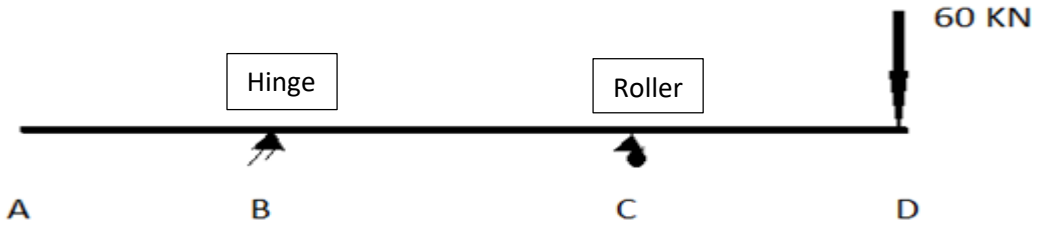
Department of Civil Engineering

(Maximum Marks: 50) **Final Term** Theory of Structure 2

**1**.Choose the best option.

B is a hinge support and C is roller support. A and D are free ends. A load of 60 KN acts in downward direction at point D. Sign conventions are as usual.
AB = CD = 1m and BC = 3m
All force options are in kN.
All moment options are in KNM.
All deformation options are in M.
E and I are given.

/10




Tip: Use data given above to solve question from (1-6).

**1**. What will be the reaction force at support C?
a) 20
b) 40
c) 80
d) 120

**2**. What will be the shape of SFD in this case?
a) Linear
b) Parabolic
c) Linear with discontinuity
d) Arbitrary curve

**3**. What is the shape of BMD for this diagram?
a) Rectangular
b) Triangular
c) Parabolic
d) Arbitrary curve

**4**. What will be the peak value of SFD?
a) 20
b) 40
c) 60

d) 80

**5**. Where would peak value of BMD lie?
a) A
b) B
c) C
d) D

**6**. Which type of joint would replace point A in its conjugate beam?
a) roller
b) pin
c) hinge
d) fixed

**7**.The ratio of shear stress and shear strain of an elastic material, is

a) Modulus of Rigidity

b) Shear Modulus

c) Modulus of Elasticity

d) Both (a) and (b)

**8**.Stress may be defined as

(a) Force per unit length

(b) Force per unit volume

(c) Force per unit area

(c) None of these

**9**. Stress may be expressed in Newtons

(a) Per millimeter square (N/mm2)

(b) Per centimeter square (N/cm2)

(c) Per meter square (N/m2)

(d) None of these

**10**. According to Muller Bresllar theorem on conjugate beam slope is equal

a. Moment

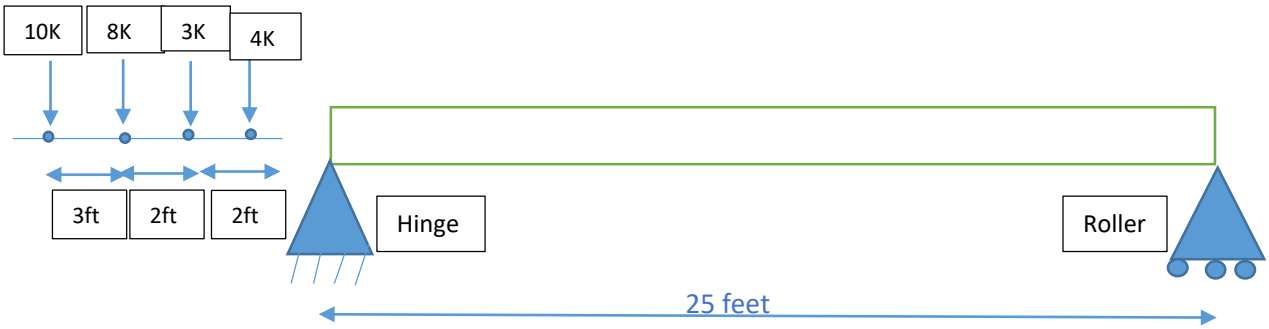
b. Shear

c. Deflection

d. None of these

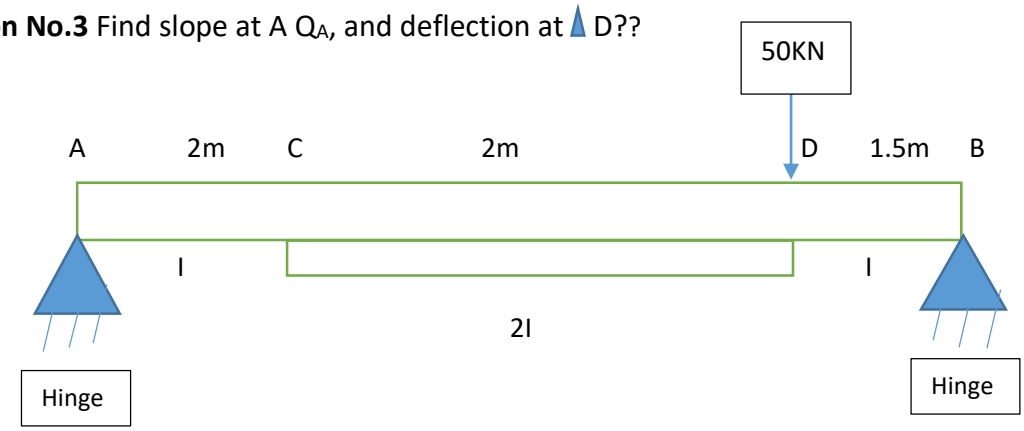
**Question No.2** Find maximum live moment in girder by using Absolute max shear and max moment method.

/20




**Question No.3** Find slope at A $Q_A$, and deflection at D??

/20




The End