

ASSIGNMENT:-

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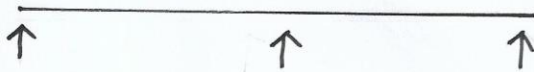
B-Tech Civil

1:- Fill in the blanks.

- 1) If I want to know the shear force and bending moment diagram produced by moving truck on a bridge then the method, I prefer to use will be brut force method.
- 2) Beam having all reactions parallel will be determinant.
- 3) The structure for which all reactions and forces can be analyzed or, formed by using equation of equilibrium is Statically determinant.
- 4) In a formula $r = 3n$, n shows no of members.
- 5) For fix and Support the number of reactions are Three.

Q no: 2 :-

A)



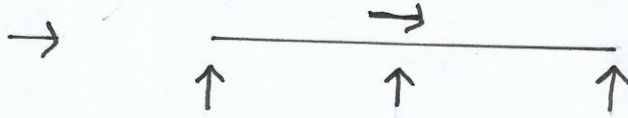
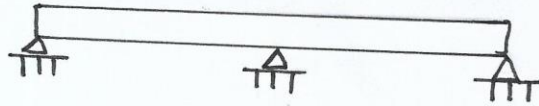
Formula:-

$$R = 3n$$

$$3 = 3(1)$$

$$3 = 3 \text{ determinant}$$

B)



∴ Formula ∴

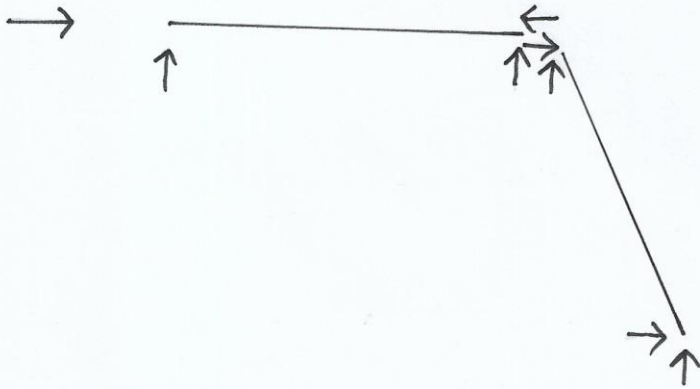
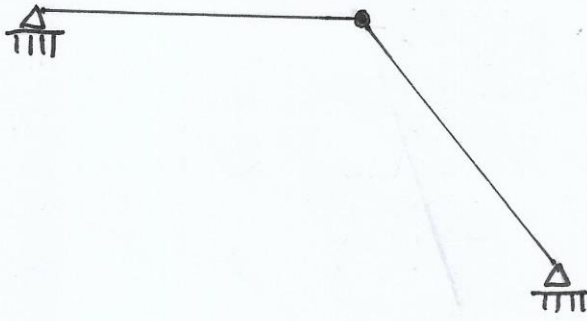
$$R = 3m$$

$$5 = 3(1)$$

$$5 > 3$$

Indeterminate by 2°

c)



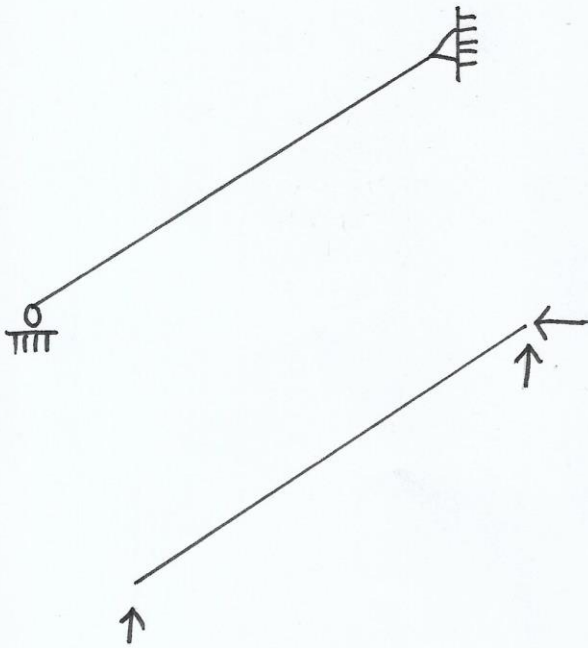
Formula:-

$$R = 3n$$

$$6 = 3(2)$$

$6 = 6$ Determinate

D)



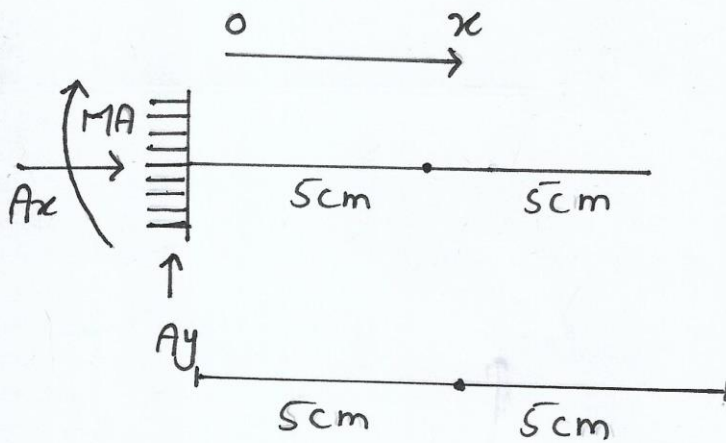
Formula:-

$$R = 3n$$

$$3 = 3(1)$$

3=3 determinate

Q No = 3 :-

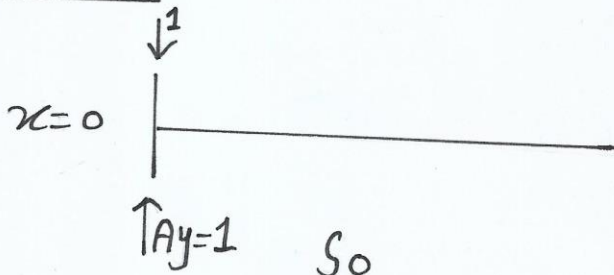


Find influence line for the reaction at A_y due to moving concentrated force.

So For Solution :-

- Use ~~but~~ force statistics.
- Place the load and calculate.

IF $x = 0$

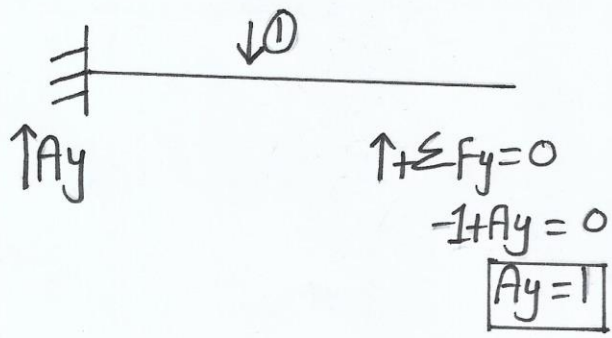


So

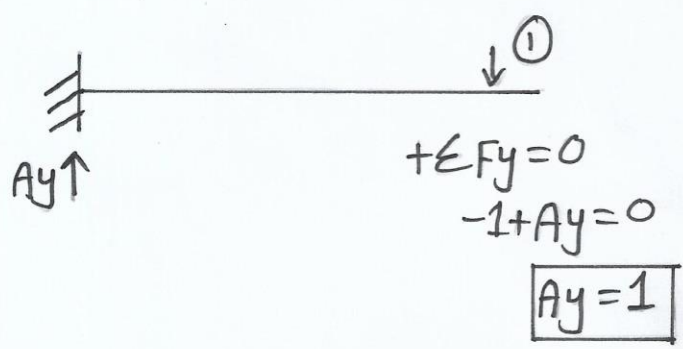
$$\uparrow \sum F = 0$$
$$-1 + A_y = 0$$
$$\boxed{A_y = 1}$$

x	A_y
0	1
5	1
10	1

If $x = 5\text{m}$:-



If $x = 10\text{m}$:-



So Influence Line:-

