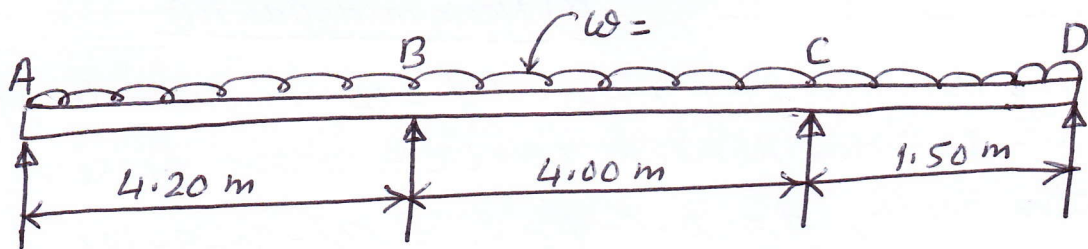


# RCC CONTINUOUS BEAM DESIGN

(P1)



1) Loadings : Dead load

Assuming, wooden floor including finishes =  $2.0 \text{ kN/m}^2 \times 2.6 \text{ m}$   
=  $5.2 \text{ kN/m}$

Self weight of beam =  $0.25 \times 0.50 \times 24$   
=  $3 \text{ kN/m}$  [Assuming  $b = 250 \text{ mm}$   
 $D = 500 \text{ mm}$ ]

Live load

Assuming live load =  $2.0 \text{ kN/m}^2 \times 2.6 \text{ m} = 5.2 \text{ kN/m}$

$\therefore$  Design uniformly distributed load,  $W$

$$= 1.4 \text{ gk} + 1.6 \text{ qk} = [1.4 \times (5.2 + 3)] + [1.6 \times 5.2]$$

$$\approx 20 \text{ kN/m}$$

$\therefore W = 20 \text{ kN/m}$

2) Design moments and Shear forces

Obtained from three moment theorem (it can also be calculated using moment and shear coefficients)

<u>Position</u>	<u>Bending moment (kNm)</u>	<u>Shear Force (kN)</u>
Support A	0	42
mid of AB	32	0
Support B	-35	48 Towards BA 40 towards BC
mid of BC	20	0
Support C	-32	40 Towards CB 17.25 towards CD
mid of CD	4.1	0
Support D	0	15