Homework n. 4

Determine the amplitude of forced damped vibration of an engine with the weight 1200 kg located on beam with bending stiffness $EI = 3045$ kN m². The beam is assumed weightless. The number of revolutions of the engine rotor is 720 per minute, the weight of unbalanced mass is 0,32 kg and the eccentricity is 8 cm. The amplitude of free damped vibration reduces itself during three periods to 75%.