**The laboratory work 6**

A system of two bodies with masses m1 and m2, connected by two springs, is given. Their rigidities are equal to c1 and c2 (Fig.).



The left load of the system is acted upon by the harmonic disturbance force Q, set with an interval of 20 seconds, then by law (1), then by law (2):



where H1 and H2 are the oscillation amplitudes, w is the oscillation frequency. The oscillation frequency, regardless of the law of oscillations, every 25 seconds decreases by 50%, then returns to the previous value.
Let x1 and x2 be the horizontal deviation of the goods from the equilibrium position (in
the initial moment of time is absent). Then the equations of motion are:



Build a model of this system

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variant | m1 | m2 | c1 | c2 | H1 | H2 | w |
| 1 | 1 kg | 1 kg | 1 kg/s2 | 1 kg/s2 | 1 m | 1.5 m | 2 s-1 |
| 2 | 2 kg | 3 kg | 5 kg/s2 | 6 kg/s2 | 1.5 m | 2.5 m | 3 s-1 |
| 3 | 3 kg | 6 kg | 2 kg/s2 | 3 kg/s2 | 1.1 m | 1.6 m | 4 s-1 |
| 4 | 4 kg | 8 kg | 3 kg/s2 | 4 kg/s2 | 1.9 m | 2.4 m | 3 s-1 |
| 5 | 8 kg | 10 kg | 6 kg/s2 | 7 kg/s2 | 2.3 m | 2.6 m | 6 s-1 |
| 6 | 10 kg | 9 kg | 7 kg/s2 | 8 kg/s2 | 3.4 m | 3.7 m | 10 s-1 |
| 7 | 9 kg | 6 kg | 4 kg/s2 | 5 kg/s2 | 1.7 m | 1.9 m | 7 s-1 |
| 8 | 7 kg | 8 kg | 6 kg/s2 | 7 kg/s2 | 1.4 m | 1.6 m | 8 s-1 |