

VIB: Vibration Isolation

Number of participants: 0

1. The problem of direct vibration isolation consists in

0 correct answer
out of 0 respondent

	Reducing the force transmitted to an object using a spring, mass and dashpot system	0%	0 votes
✓	Reducing the force transmitted to an object by using a spring and dashpot	0%	0 votes
	Reducing the motion of an object using a spring and a dashpot	0%	0 votes

2. Cite a few examples of direct isolation problems in everyday life

0 respondent

No answers in this question

3. A simplified SDOF system can be considered to design an isolation system, it consists in

0 correct answer
out of 0 respondent

a mass, spring, dashpot system representing one of the modes of the object to be isolated	0%	0 votes
<input checked="" type="checkbox"/> a mass representing the object, assumed to be rigid, a spring and a dashpot representing the isolation system	0%	0 votes
a mass-spring system which is a reduced model of the object, and a damper representing the isolation system	0%	0 votes

**For the direct isolation problem, the
4. isolation domain is the range of
frequencies for which**

0 correct answer
out of 0 respondent

✓	the force transmitted by the object vibration is lower than the force applied to it	0%	0 votes
	the force transmitted by the object vibration is higher than the force applied to it	0%	0 votes
	the force transmitted by the object vibration is equal to the force applied to it	0%	0 votes

The frequency limit between the 5. isolation domain and the amplification domain is

0 correct answer
out of 0 respondent

	the natural frequency of the mass-spring system	0%	0 votes
✓	sqrt(2) times the natural frequency of the mass-spring system	0%	0 votes
	2 times the natural frequency of the mass-spring system	0%	0 votes

6. In an isolation system, damping is

0 correct answer
out of 0 respondent

	a good thing	0%	0 votes
	a negative thing	0%	0 votes
✓	it depends on the frequency of excitation and the natural frequency of the isolation system	0%	0 votes

**For the inverse vibration isolation
7. problem, the isolation domain
corresponds to**

0 correct answer
out of 0 respondent

✓	A frequency band in which the sensitive equipment vibrates less than the structure to which it is attached	0%	0 votes
	The domain in the system where the vibration is reduced	0%	0 votes
	The domain for which thermal insulation is not necessary	0%	0 votes
	A frequency band in which the the force transmitted to the environment is reduced	0%	0 votes

**Cite a few examples of inverse
8. vibration isolation problems in
everyday life**

0 respondent

No answers in this question

To achieve isolation, the natural
9. frequency of the mass-spring system
should

0 correct answer
out of 0 respondent

	correspond to the frequency range of excitation	0%	0 votes
	be much higher than the frequency of excitation	0%	0 votes
✓	be much lower than the frequency of excitation	0%	0 votes

10. In order to increase the isolation
domain, one can

0 correct answer
out of 0 respondent

✓	decrease the stiffness of the spring in the isolation system	0%	0 votes
✓	increase the mass of the system to isolate	0%	0 votes
	increase the damping in the isolation system	0%	0 votes

**The problem of transmission of
11. vibrations from a tram to the
surroundings should be treated as**

0 correct answer
out of 0 respondent

- | | | | |
|---|---|----|---------|
| ✓ | a direct vibration
isolation problem | 0% | 0 votes |
| | an inverse vibration
isolation problem | 0% | 0 votes |

**The problem of transmission of
12. vibrations from a space launcher to
a payload should be treated as**

0 correct answer
out of 0 respondent

- | | | | |
|---|---|----|---------|
| | a direct vibration
isolation problem | 0% | 0 votes |
| ✓ | an inverse vibration
isolation problem | 0% | 0 votes |