

Structures and Forces Practice Quiz

Topic 4 - Forces, Loads and Stresses

1. The change in the shape or size of a structure can be due to internal forces which are produced by external forces acting on the structure and are called ...

structural instability

dead loads

live loads

deformation

2. Bend or twist a certain material, by pressing on different parts, in different directions, at the same time. The force you are creating is called ...

tension force

compression force

shear force

torsion force

3. A hurricane or tornado is an example of a force that can cause extreme damage to a structure when it acts on the structure, even for a short time. The environmental event is classified as a ...

live load

dead load

deformation

torsion event

4. Cross-country skis are designed to bend when a force is applied. Bending allows the middle of the ski to contact more snow, giving the skier a better grip when pushing off. Compression is the force that is applied to the ...

binding

edges

camber

ski boot

5. The strength of a certain material has been described by scientists as the forces between the tiniest particles of the material. Because the particles have yet to be seen, scientist can only make ...

inferences

observation

analysis

conclusions

Check your Answers

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Topic 4 - Forces, Loads and Stresses

1. The change in the shape or size of a structure can be due to internal forces which are produced by external forces acting on the structure and are called ...

structural instability

dead loads

live loads

deformation (Text p. 305) The change in shape or size of the structure is called deformation.

2. Bend or twist a certain material, by pressing on different parts, in different directions, at the same time. The force you are creating is called ...

tension force

compression force

shear force (Text p. 307) Figure 4.36 shows the different types of internal forces which can act on a structure. The shear forces bend or tear a material by pressing different parts in different directions at the same time.

torsion force

3. A hurricane or tornado is an example of a force that can cause extreme damage to a structure when it acts on the structure, even for a short time. The environmental event is classified as a ...

live load (Text p. 307) A changing or non-permanent force acting on a structure

dead load

deformation

torsion event

4. Cross-country skis are designed to bend when a force is applied. Bending allows the middle of the ski to contact more snow, giving the skier a better grip when pushing off. Compression is the force that is applied to the ...

binding

edges

camber (Text p. 308) The camber is the middle of the ski, where the skier puts his/her weight, or compression force to push off.

ski boot

5. The strength of a certain material has been described by scientists as the forces between the tiniest particles of the material. Because the particles have yet to be seen, scientist can only make ...

inferences (Text p. 314) In Figure 4.39 you can see what scientists infer about the particles that are far too small to see.

observation

analysis

conclusions