Bridges Quiz

1. Place the following types of bridges in order, from weakest to strongest: A) Suspension bridge; B) Arched bridge; C) Beam bridge
a. A, B, C  
b. C, A, B  
c. C, B, A  
d. A, C, B

2. The Verrazano Narrows Bridge in New York City is a suspension bridge with a main span of 1,298 meters. What does this mean?
a. The bridge is 1,298 meters from end to end  
b. The distance between the bridge’s piers is 1,298 meters  
c. The bridge is 1,298 meters high  
d. Each of the bridge’s two decks is 649 meters long

3. In a bridge, which two forces act in direct opposition to one another?
a. Compression and acceleration  
b. Gravity and compression  
c. Gravity and tension  
d. Tension and compression

4. How do arched bridges compare to suspension bridges?
a. Arched bridges have shorter spans than suspension bridges  
b. Arched bridges are more expensive to build than suspension bridges  
c. Suspension bridges can hold less weight than arched bridges  
d. Suspension bridges are better-designed than arched bridges

5. What can you infer about beam bridges from the information presented in the movie?
a. Beam bridges are the oldest type of bridge  
b. Very few beam bridges exist around the world  
c. Beam bridges cannot be built over long distances  
d. Beam bridges can only be built out of wood

6. Which shape would you find in a truss that supports a beam bridge?

- a.  
- b.  
- c.  
- d.  

7. If you applied compression to an empty cardboard box, what would you be doing?
a. Strengthening the box with strips of firm material  
b. Placing a heavy weight on top of the box  
c. Pulling the box apart  
d. Pushing the sides of the box together

8. How does a suspension bridge transfer the forces at work on the deck of the bridge?
a. Through a series of trusses  
b. Through pulleys and levers  
c. Through cables and towers  
d. By dispersing the force throughout the entire length of the deck

9. Where might you find a beam bridge with only two piers? Choose the best answer.
a. Crossing one of the Great Lakes  
b. Crossing a narrow creek  
c. Crossing a wide, deep river  
d. Crossing a wide but shallow section of a bay

10. What does Tim mean when he says that an arched bridge dissipates the forces that act on it?
a. It spreads the forces out over a wide area  
b. It transfers all the forces to the abutments at either end of the bridge  
c. It makes the forces weaker  
d. It concentrates all the forces at the center of each arch

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