

Mix and Flow of Matter

Topic 8 - Fluid Systems Practice Quiz

1. Valves are devices used to regulate the flow of a fluid. In an aerosol product such as whipped cream the cream inside the can can be dispersed easily by bending the nozzle. This is possible because the particles always ...

travel from lower pressure areas

travel from higher pressure areas

get more energy when they are released

make foam when they are released

2. In a model hydraulic press model built by an apprentice, a pedal is used to push down the large piston, while the small piston lifts up a load. The apprentice's model didn't work. What is wrong with it?

A. The pistons should have the same diameter.

B. The load should be on the larger piston.

C. Both pistons should be smaller.

D. Both pistons should be larger

3. Two identical syringes are used to build a model of a hydraulic press. The press does not lift the loads you expect. To remedy the situation, you should use ...

A. larger syringes

B. longer syringes

C. smaller syringes

D. syringes with different diameters

4. Fluids, such as water have been transported from place to place using hydraulic systems. The aqueduct is an ancient device that transported water over great distances. It was able to do this because of ...

the force of gravity

a very rudimentary hydraulic system

a very rudimentary pneumatic system

simple pumps set up along the way

5. In terms of design, a pneumatic device (such as a compressor) resembles a hydraulic press. The distinguishing difference is that this pneumatic device uses ...

compressed alcohol

incompressible fluids

compressed air

an electrical current to operate it

6. The primary function of a pump is that it is a device used for ...

A. moving fluids

B. filtering fluids

C. analyzing fluids

D. measuring fluids

Check Answers

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1. Valves are devices used to regulate the flow of a fluid. In an aerosol product such as whipped cream the cream inside the can can be dispersed easily by bending the nozzle. This is possible because the particles always ...
 - X travel from lower pressure areas
 - travel from higher pressure areas (Text p. 78) Particles always flow from areas of higher pressure to areas of lower pressure**
 - X get more energy when they are released
 - X make foam when they are released
2. In a model hydraulic press model built by an apprentice, a pedal is used to push down the large piston, while the small piston lifts up a load. The apprentice's model didn't work. What is wrong with it?
 - X A. The pistons should have the same diameter.
 - B. The load should be on the larger piston. (Text p. 80) To raise the load with less force, you need to apply the force to the smaller piston, while the load is placed on the larger piston**
 - X C. Both pistons should be smaller.
 - X D. Both pistons should be larger
3. Two identical syringes are used to build a model of a hydraulic press. The press does not lift the loads you expect. To remedy the situation, you should use ...
 - X A. larger syringes
 - X B. longer syringes
 - X C. smaller syringes
 - D. syringes with different diameters (Text p. 80) The syringes must be different sizes, otherwise there is no advantage**
4. Fluids, such as water have been transported from place to place using hydraulic systems. The aqueduct is an ancient device that transported water over great distances. It was able to do this because of ...
 - the force of gravity (Text p. 82) Word Connect**
 - X a very rudimentary hydraulic system
 - X a very rudimentary pneumatic system
 - X simple pumps set up along the way

5. In terms of design, a pneumatic device (such as a compressor) resembles a hydraulic press. The distinguishing difference is that this pneumatic device uses ...
- X **compressed alcohol**
 - X **incompressible fluids**
 - compressed air (Text p. 82) A compressor uses compressed air**

 - X **an electrical current to operate it**
6. The primary function of a pump is that it is a device used for ...
- A. moving fluids (Text p. 82) This simple hydraulic device is used to build up pressure, so the fluid will flow from an area of higher pressure to an area of lower pressure.**
 - X **B. filtering fluids**
 - X **C. analyzing fluids**
 - X **D. measuring fluids**