

Name \_\_\_\_\_ School \_\_\_\_\_ Contestant Number \_\_\_\_\_

**2015 Cowboy Classic - Agricultural Technology and Mechanical Systems  
Machinery and Equipment Systems**

You are classified as a senior agricultural education student at the University of Wyoming. During your summers and on university holidays, you are employed with E&D Cattle Company out of Cheyenne. There are a well-established cattle operation based out of Southeastern Wyoming, and contribute to the economy considerably. A large operation, they are constantly repairing equipment used in their operation. One of the cattle chutes on the northern section of their operation is in desperate need of repair, and you have been assigned the task. The owner has numbered the parts that need repair. **Match the marked parts of the squeeze chute with the list of parts below.**

**Match the number attached to a part on the squeeze chute with its corresponding part below.**

Matching			Part Name		Part Name
1. <u>G</u>	6. <u>F</u>	A	Hydraulic reservoir	F	Head gate hydraulic lever
2. <u>C</u>	7. <u>B</u>	B	Hydraulic hoses	G	Tail gate hydraulic lever
3. <u>E</u>	8. <u>H</u>	C	Palpation doors	H	Hydraulic stabilizer
4. <u>A</u>	9. <u>D</u>	D	Neck extender	I	Side gate hydraulic cylinder
5. <u>I</u>	10. <u>J</u>	E	Side panels	J	Tail gate hydraulic cylinder

**Answer the following questions on hydraulics in the space provided**

1. B The basic idea behind any hydraulic system is very simple: Force that is applied at one point is transmitted to another point using \_\_\_\_\_.

- A. a compressible fluid      B. an incompressible fluid      C. an hydraulic intensifier

2. B Large hydraulic machines usually have \_\_\_\_\_ to hold the difference in the volume of oil displaced by the two sides of the cylinder.

- A. larger diameter lines      B. external reservoirs      C. smaller diameter lines

3. B The simplest hydraulic device that you will find in common use today is what?

- A. a bulldozer      B. a log splitter      C. a crane

4. D In hydraulics, a piezometer opening in pipes measures

- A. velocity head      B. total pressure      C. negative static pressure      D. static pressure

Criterion	Points Possible	Points Earned
Questions	28 (2 pts. ea.)	
Safety	2	