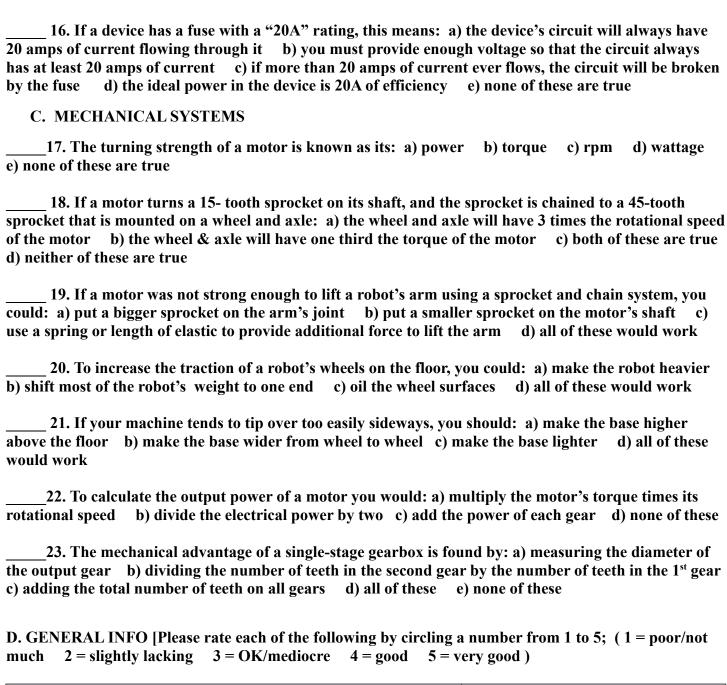
OCCRA PRE-TEST 2017

Students: thank you for participating in the first-ever OCCRA pre-test! This test will help us develop materials to make the OCCRA experience more valuable for years to come, AND the data from it might help us when we go to ask corporate sponsors for donations! Please answer as many questions as you can without getting help from other people or other sources of info (so, no internet, textbooks, etc.) Answer any questions that you can but please do not worry about it if you can't answer many of the questions. Put your name on *this* sheet but please Do NOT put your name on your test pages. We do want to get your name on a separate list but we would like the test to be anonymous.

STUDENT NAME		
SCHOOL OR TEAM NUMBER		

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A PNEUMATICS [For Questions 1-13, write the letter of the best answ left.]	er in the blank spaces on the			
1. Devise that creates pressure by squeezing a gas	a) valve			
2. The inner diameter of a cylinder	b) actuator			
3. The control devices used in pneumatics	c) PSI			
4. Any liquid or gas	d) bore			
5. An opening that fluids flow through	e) compressor			
6. Using pressurized gases to do work	f) double-acting cylinder			
7. Customary unit for measuring pressure in the US	g) fluid			
8. The maximum length travelled by the rod of a cylinder	h) port			
9. The amount of force per unit of area	i) pressure			
	j) pneumatics			
	k) stroke			
10. To calculate the extension force of a pneumatic cylinder you sho b) multiply pressure times piston area c) subtract the bore from the st				
B. ELECTRICAL SYSTEMS				
11. The electromotive force that drives the current is commonly known b) wattage c) resistance d) voltage e) none of these are true	nown as: a) amperage			
12. To find the electrical power used by a motor you should; a) ac b) divide the resistance by the flow c) double the current drawn d) n voltage e) none of these are true	_			
13. The complete path followed by an electric current is known as c) power loss d) all of these e) none of these are true	the: a) circuit b) resistance			
14. When a short circuit occurs: a) there is a big increase in curre resistance c) the conductors tend to heat up d) all of these are true	nt b) there is a big drop in e) none of these are true			
15. When trouble shooting to find a break in an electric circuit, the a) Where the resistance is lowest b) where the biggest voltage drop occonnections d) all of these are true e) none of these are true				



My understanding of pneumatic systems		2	3	4	5
My understanding of electrical control systems		2	3	4	5
My understanding of mechanical systems		2	3	4	5
My ability to work effectively with others on a team	1	2	3	4	5
My ability to write computer programs		2	3	4	5
My understanding of what engineering and technician careers are like		2	3	4	5
My understanding of the design process used in engineering and my ability to follow it		2	3	4	5