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Chapter 7-8, Serway; *ABSOLUTELY NO CHEATING!*
Please write down the answers on the blank space or on the back of this paper. Answer should be in english. [ ] indicates the question points.

Q1. Suppose you sit on a chair made by spring that obeys Hooke's law. (a) If your weight is m = 60 kg, how much the spring will be compressed (b) If you want to compress it 2 times than now, how much weight you should gain? (c) Find out the amount of work need to do by an external agent for that 2 times compression of the spring from its initial position? Here, spring constant, $k = 4 \times 10^4$ N/m
[20+20+20=60]

Q2. Electric car is the future vehicle for transportation. Suppose you buy a new Tesla Model-3 car which have a battery power is 400 kW. Once you charge, it can provide 10 hrs continuous riding. How much distance can you cover during the time? Let the mass of your car is 250 kg and the energy consumed by the engine is totally equal to kinetic energy of the car. [40]

General Physics I Quiz 1 (106/ 2017).
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You may use the backside of the paper