ĐẠI HỌC DUY TÂN Khoa: KHTN Bộ môn: Vật lí -----⌘-----	ĐỀ THI KẾT THÚC MÔN HỌC **Môn: Vật lí đại cương A1 cho CSU** Học kì I-Năm học: 2018-2019 **Khối lớp: CSU PHY 101 AIS**	ĐỀ SỐ: 02

Thời gian làm bài: 60 phút (không kể thời gian phát đề)

Chú ý: Thí sinh có thể dùng từ điển giấy

Problem 1 (4,0 points): A person is standing on the edge of a cliff and throwing a ball upward into the air with an initial velocity of 15.0 m/s, so that the ball can fall to the base of the cliff 50.0 m below as in Figure. 1. Take $g = 9.8\ m/s^2$.

a) How long does it take the ball to reach the base of the cliff?
b) What is the total distance traveled by the ball? (Ignore air resistance).

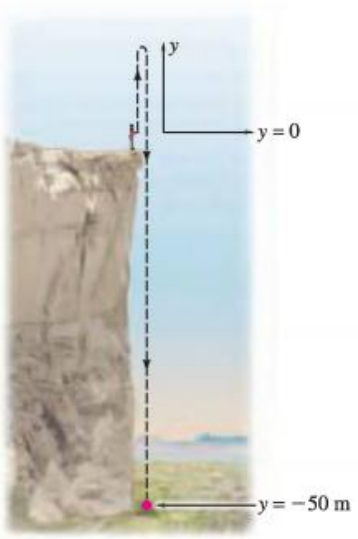

Figure. 2

Problem 2 (3,0 points): A 1200-kg car sliding on a horizontal surface has speed 66 km/h when it strikes a horizontal coiled spring and is brought to rest in a distance of 2.2 m. Assume that friction can be neglected.

a) Find the kinetic of energy of the car.
b) What is the spring constant of the spring?

Problem 3 (3,0 points): A 0.72-m-diameter solid sphere can be rotated about an axis through its center by a torque of 10.8 N.m which accelerates it uniformly from rest through a total of 180 revolutions in 15.0 s. What is the mass of the sphere?

THE END!

Người duyệt đề	**Người ra đề**
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