+1/1/60+

PHY 171 **Exam 3** **Fall 2018**

Name:

Question 1 Courtney Force topped qualifying with a 3.826-second run at 150.2 m/s in the NHRA Arizona Nationals. What was her average acceleration?

- [ ] 39.26 m/s^2
- [ ] 32.8 m/s^2
- [ ] 36.95 m/s
- [ ] 39.3 m/s
- [ ] 28.33 m/s^2

Question 2 A jogger runs down a straight road with an average velocity of 2.5 m/s for 6.00 minutes. What is her final position if her initial position was zero.

- [ ] 15 m
- [ ] 975 m
- [ ] 14.5 m
- [ ] 860 m
- [ ] 900 m

Question 3 Suppose the net external force exerted on a vaccum cleaner is 23 N parallel to floor. The mass of the vaccun cleaner is 15 kg. What is the acceleration?

- [ ] 1.5 m/s^2
- [ ] 345 m/s^2
- [ ] 1.53 m/s
- [ ] 0.652 m/s^2
- [ ] 0.65 m/s

Question 4 Suppose a 130 kg wooden crate is resting on a wood floor. What is the maximum force you can exert horizontally on the crate without moving it? For wood on wood $\mu_s = 0.5$ and $\mu_k = 0.3$.

- [ ] 380 N
- [ ] 640 N
- [ ] 65 N
- [ ] 720 N
- [ ] 1300 N

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For your examination, preferably print documents compiled from auto-multiple-choice.

Question 5 As a woman walks, her entire weight is momentatily placed on one heel of her shoes. Calculate the pressure exerted in the floor if the heel has an area of 1.25 cm^2 and the womans mass is 55 kg.

- ☐
- ☐
- ☐
- ☐
- ☐

Question 6 A submarine is stranded on the ocean floor 17 m below the surface. Calculate the force needed to open the hatch from the inside given it is circular and 0.50 m in diameter. *rho* of seawater is 1.025 $\times 10^3$ kg/m^3.

- ☐
- ☐
- ☐
- ☐
- ☐

Question 7 The main span of a bridge is 1275 m long at its coldest. The bridge is exposed to a temperature ranging from $-15°C$ to

- ☐
- ☐
- ☐
- ☐
- ☐

Question 8

- ☐
- ☐
- ☐
- ☐
- ☐

Question 9

- ☐
- ☐
- ☐
- ☐
- ☐

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Question 10

- ☐
- ☐
- ☐
- ☐
- ☐

Question 11

- ☐
- ☐
- ☐
- ☐
- ☐

Question 12

- ☐
- ☐
- ☐
- ☐
- ☐

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