ONTARIO PHYSICS, GRADE 12, UNIVERSITY PREPARATION (SPH4U) · UNIT A · 10 QUESTIONS

Dynamics — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **A drag force generally increases with**

- A Decreasing area
- B Increasing speed
- C Decreasing speed
- D Lower density

Understand It with Pulse | Flag a mistake

2 **The coefficient of friction is the ratio of friction force to**

- A Normal force
- B Mass
- C Weight only
- D Speed

Understand It with Pulse | Flag a mistake

3 **A friction force of 12 newtons with normal force 40 newtons gives a coefficient of friction of**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A pulley system with two supporting ropes gives a mechanical advantage of about**

A 3

B 1

C 4

D 2

Understand It with Pulse | Flag a mistake

5 **For a mass on a frictionless incline, acceleration down the slope depends on the incline angle and**

- A Mass
- B Colour
- C Length
- D Gravitational field strength

Understand It with Pulse | Flag a mistake

6 **A conical pendulum has its string tension providing both weight balance and**

- A Friction
- B Drag
- C Centripetal force
- D Tangential force

Understand It with Pulse | Flag a mistake

7 **Geostationary satellites orbit above the equator with a period of**

A 24 hours

B 1 year

C 12 hours

D 1 hour

Understand It with Pulse | Flag a mistake

8 **Escape velocity from a planet depends on the planets mass and**

A Atmosphere

B Radius

C Rotation

D Moons

Understand It with Pulse | Flag a mistake

9 **A horizontal projectile has horizontal acceleration of**

A Gravity × mass

B Its initial speed

C 9.8 metres per second squared

D Zero ignoring air resistance

Understand It with Pulse | Flag a mistake

10 **A projectile launched at 45 degrees gives maximum range for a given speed because horizontal and vertical components are**

A Zero

B Unequal

C Maximum separately

D Balanced

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. B
2. A
3. 0.3
4. D
5. D
6. C
7. A
8. B
9. D
10. D

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