



ابوظبي
Abu Dhabi

بوليتكنك
POLYTECHNIC

PHYSICS I LAB

TITLE	Final Exam		
Date	<input type="text"/>	<input type="text"/>	<input type="text"/>
	dd	mm	yyyy
STUDENT NAME	<input type="text"/>		
STUDENT ID	<input type="text"/>		
STUDENT Grade	/24		

1. When we increase the length of the thread the time period will
 - a. Decrease.
 - b. Increase.
 - c. Will not change.

2. If the length of the thread increases by eight times (the other parameters are kept constant), then the period of the oscillation will be.....
 - a. multiplied by 4
 - b. multiplied by 2
 - c. multiplied by 8

3. If the angle (Amplitude) was decreased; the time period of the oscillation will.....
 - a. changes to be the half
 - b. not change
 - c. decrease

4. If the T (Time period) of the pendulum at 50 cm was 2.7s, logically for the length 80, T (time period) will be
 - a. 3s
 - b. 0.7s
 - c. 1.3s

5. The mass and the angle of the pendulum were kept constant In order to have an accurate measuring, when testing the effect of the length on the angle of the pendulum
 - a. False
 - b. True
 - c. Not a or b

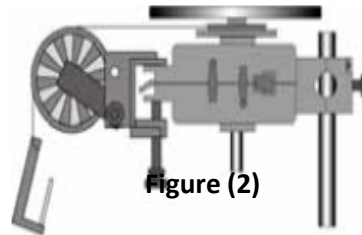
6. The tool which used to find the mean is
 - a. Linear fit tool
 - b. Statistics tool
 - c. Smart tool

7. The tool that used to find the coordinate points is
 - a. Smart tool
 - b. Linear fit tool
 - c. Statistic tool



8. The sensor shown in Figure (2) is

- Motion sensor
- Rotary motion sensor
- Acceleration sensor

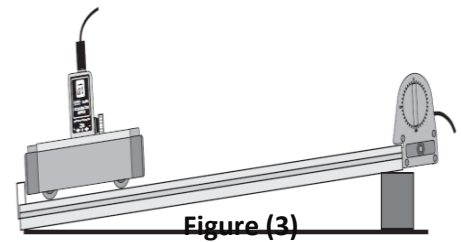


9. The unit of μ_k is

- no unit
- N/Kg
- N/m

10. The sensor which used above the cart in Figure (3)

- Acceleration sensor
- Motion sensor
- Rotary sensor

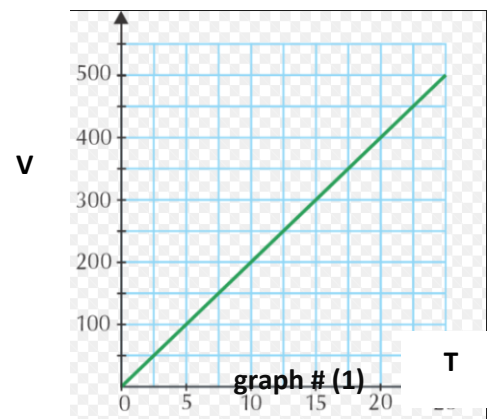


11. The distance as shown in Figure (3):

- Decrease when the cart moves up
- Increasing when the cart moves down
- Both a and b

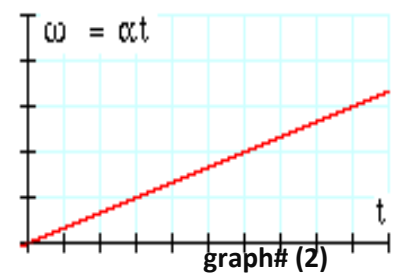
12. The acceleration illustrates by graph# (1)

- Is constant
- Decreasing
- Increasing



13. The graph# (2) of the angular velocity VS. Time indicates that the rotation was:

- positive slope , anti-clockwise rotation
- negative slope, clockwise
- Positive slope , clockwise



14. If the $m_{\text{cart1}} = m_{\text{cart2}} = 0.249$, $v_{i\text{-cart1}} = 0.316$ m/s, $v_{i\text{-cart2}} = -0.333$ m/s , $v_f = -0.010$ m/s , what is the momentum after the collision (note : it is inelastic collision)

- 0.0050 kgm/s
- 1.002 kgm/s
- 0.0055 kgm/s²

15. Momentum of two objects moving with same speed but in opposite direction upon collision is

- a. *increased*
- b. *decreased*
- c. *is zero*

16. The unit of the spring constant K is (knowing that $F = k.x$)

- a. *N/m*
- b. *Kg/s²*
- c. *Both a and b*

17. The unit of the angular acceleration is

- a. *Rad/s*
- b. *Rad/s²*
- c. *Rad*

18. If the net force remained constant but the total mass increased, what happen to the slope of (velocity versus time) graph.

- a. *Increases*
- b. *It will be constant*
- c. *Decreases.*

19. What is the SI unit of length?

- a. *Meter*
- b. *Kilometer*
- c. *inch*

20. Changing the length will change the swinging time of the pendulum.

- a. *True*
- b. *False*

21. How long was steel dynamic track we used in the lab?

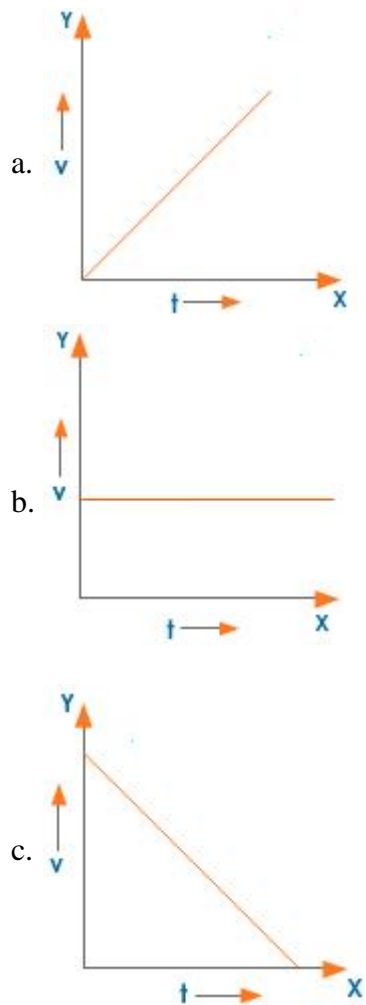
- a. *1 meter*
- b. *1.2 meter*
- c. *1.5 meter*

22. What is the name of this object?

- a. *Collision cart.*
- b. *Rectangular cart.*
- c. *Go cart.*



23. Identify the v- t graph representing uniform velocity.



24. The photos show the Pasco interface and the acceleration sensor , at which channels the acceleration sensor will work on the interface :

- a. At the digital channels (1,2,3,4)
- b. At the analog channels(A,B,C)
- c. Not a or b

