

Edit Mode is: **ON** ?**2021 Spring Term (1) General Physics I PHYS 20300 LM3[32564] (City College)**

Tests, Surveys, and Pools

Tests Test Canvas : Midterm Phys 203 - Thursday March 25, 2021

This Test has 125 attempts. For information on editing questions, click **More Help** below. 

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The Test Canvas lets you add, edit, and reorder questions, as well as review a test. [More Help](#)

[Question Settings](#)

You can edit, delete, or change the point values of test questions on this page. If necessary, test attempts will be regraded after you submit your changes.

Description Midterm Phys 203

Instructions

- Test consists of 20 questions in 60 minutes.
- Once started, the test must be completed in one sitting. Do not leave the test to be graded.
Submit.
- Test will save and submit automatically when time expires.
- We present one question at a time with no backtracking.
- That is, each question will appear only one time. After answering the question, you cannot return to it to come back and correct your answer.
- A question that is not answered receives zero points.
- The grade is based on your answers to all 20 questions.
- If you are logged out automatically by BlackBoard, take a screenshot and email to hmakse@ccny.cuny.edu
- Test starts by 10:15AM. Come to class at 10:00AM and be ready by 10:15AM. The test will be conducted in Blackboard.
- If your internet connection is down during the test you will need to provide a solution to the problem. Do a Speed Test (google 'internet speed test' and run) BEFORE the test. Take a screen shot of the speed of your internet connection showing the time started. Then, do 'tracert ccny.cuny.edu' in Terminal in Mac or 'tracert ccny.cuny.edu' (cmd or Command Prompt) in Windows, and take a screenshot BEFORE the test. If you go down DURING the exam, repeat the speed test and tracert (or tracert) a

new screenshots. Send the information to hmakse@ccny.cuny.edu. Do not
you have a problem.

Total 20

Questions

Total Points 40

Number of 125
Attempts

Select: Select by Type:

Delete and Regrade

Points

Update and Regrade

Hide Question Details

1. Multiple Choice: Chapter 2: An object falls freel...

Points:

Question **Chapter 2:** An object falls freely under gravity. The sign and magnitude of the velocity of the object is (ignore air resistance):

Answer negative and increasing

positive and decreasing

same as the sign of the acceleration of gravity and increasing

none of the above

2. Multiple Choice: Chapter 4: Forces: Chapter 4: A block moves on a fr...

Points:

Question **Chapter 4:** A block moves on a frictionless incline plane with angle θ . The normal force on the block is:

Answer larger than the weight

smaller than the weight

same as the weight

none of the above

3. Multiple Choice: Chapter 2: A coin is tossed up i...

Points:

Question **Chapter 2:** A coin is tossed up in a planet different from Earth with initial velocity $v_0=5.0$ m/s. The coin reaches the maximum height in 2 s. The magnitude of the acceleration of gravity in this planet is (ignore air resistance):

Answer 2.5 m/s²

10.0 m/s²

5.0 m/s²

9.8 m/s²

4. Multiple Choice: Chapter 2: A car is traveling to...

Points: **2**

Question **Chapter 2:** A car is traveling to the West and starts to slow down. The acceleration of the car is:

Answer a vector toward the West

a vector towards the East

positive

none of the above

5. Multiple Choice: Chapter 2: A coin is tossed up w...

Points: **2**

Question **Chapter 2:** A coin is tossed up with initial velocity $v_0=5.0$ m/s Which statement is true (ignore air resistance):

Answer The acceleration of the coin at the maximum height is zero

The velocity of the coin at the maximum height is negative

The time that it takes to reach the maximum height is smaller than the time that it takes to go from the maximum height back to the same initial position

none of the above

6. Multiple Choice: Chapter 3: A ball is kicked at a...

Points: 2

Question	Chapter 3: A ball is kicked at an angle above the horizontal (x-positive direction). The ball reaches the maximum height after 2 s and lands 8 m away from the kicking point (ignore air resistance). The initial velocity in the x-direction is:
Answer	4 m/s <input checked="" type="radio"/> 2 m/s 16 m/s none of the above

 7. Multiple Choice: Chapter 3. A ball is kicked at a...

Points: 2

Question	Chapter 3. A ball is kicked at an angle $\theta=30^\circ$ above the horizontal (x-direction). The ball reaches the maximum height in 10 s (ignore air resistance). What is the magnitude of the initial velocity?
Answer	98 m/s 49 m/s <input checked="" type="radio"/> 196 m/s 113 m/s

 8. Multiple Choice: Chapter 3: A ball is kicked at a...

Points: 2

Question	Chapter 3: A ball is kicked at an angle $\theta=30^\circ$ above the horizontal (ignore air resistance). Consider the following statements: (A) The acceleration is always negative independent of the coordinate system. (B) The magnitude of the velocity is zero at the maximum height. (C) The magnitude of the velocity at the point of maximum height is the same as the initial velocity in the horizontal direction.
Answer	Only (A) and (B) are true.

Only (C) is true.

Only (B) and (C) are true.

Only (B) is true.

9. Multiple Choice: Chapter 3: In a projectile motio...

Points: **2**

Question **Chapter 3:** In a projectile motion under gravity, the velocity in the horizontal direction (ignore air resistance):

Answer is always the same

increases with time

increases and then decreases

none of the above

10. Multiple Choice: Chapter 4: A block is sitting on...

Points: **2**

Question **Chapter 4:** A block is sitting on a table. Consider the following statements: (A) the reaction of the normal force on the block is the weight of the block. (B) The magnitude of the normal force on the block is equal to the weight of the block. (C) The reaction of the weight of the block is in the center of the Earth.

Answer Only (A) is true.

Only (B) and (C) are true.

Only (B) is true.

Only (C) is true.

11. Multiple Choice: Chapter 4: A block of mass m is ...

Points: **2**

Question **Chapter 4:** A block of mass m is sliding on a horizontal surface with coefficient of kinetic friction μ_k . What is the magnitude (absolute value) of the acceleration of the block:

Answer

g

 $\mu_k g$
 g/μ_k $\mu_k m g$
 12. Multiple Choice: Chapter 2/6: An object is droppe...

Points: 2

Question

Chapter 2/6: An object is dropped from point A (starting from rest) from a cliff of height H and strikes the ground at point B with velocity v_B (ignore air resistance). The object is falling in free fall. Consider the following statements: (A) $v_B = \sqrt{2gH}$. (B) The kinetic energy at A is the same as the potential energy at point B. (C) The kinetic energy at B is the same as the potential energy at A. (D) The total mechanical energy at B is equal to the total mechanical energy at A. (E) $v_B = \sqrt{gH}$

Answer

Only (A) is true.

 Only (A), (C) and (D) are true.

Only (A) and (C) are true.

Only (E) is true.

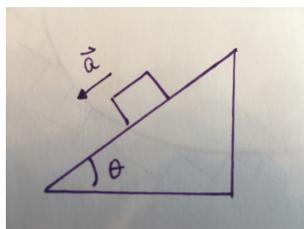
Only (B), (C) and (D) are true.

 13. Multiple Choice: Chapter 4: A block of mass m is ...

Points: 2

Question

Chapter 4: A block of mass m is going down a slope with an angle θ to the horizontal. The absolute value of the acceleration of the block is a . There is kinetic friction force, f_k , between the block and the surface. Which statement is correct:



Answer

$$f_k = m g \sin(\theta)$$

$f_k - m g \sin(\theta) = - m a$

$$- f_k - m g \sin(\theta) = m a$$

$$f_k + m g \sin(\theta) = - m a$$

 14. Multiple Choice: Chapter 6: In the work-energy th...
Points: **2****Question**

Chapter 6: In the work-energy theorem, consider the following statements: (A) The net work done minus the initial kinetic energy is the final kinetic energy. (B) The net work done is equal to the change in kinetic energy. (C) the net work done is equal to the change in total mechanical energy. (D) The net work done is always positive. (E) The net work done is negative when the object slows down.

Answer

Only (A) is true.

Only (B) is true.

Only (B) and (D) are true.

 Only (B) and (E) are true.

Only (C) is true.

Only (C) and (E) are true.

 15. Multiple Choice: Chapter 5: Which statement is fa...
Points: **2****Question**

Chapter 5: Which statement is false about the centripetal acceleration:

Answer
 An object moving at constant magnitude of velocity cannot have a centripetal acceleration.

An object moving at a constant velocity in magnitude and direction cannot have a centripetal acceleration

An object moving in uniform circular motion always has a centripetal acceleration

An object in uniform circular motion of radius R has a period proportional to the square root of R^3 .

16. Multiple Choice: Chapter 5: A satellite is orbiti...

Points: 2

Question Chapter 5: A satellite is orbiting the Earth at an orbit of radius R and period T . If the radius of the orbit is increased by a factor of 4, then the period increases by a factor of:

Answer 8

2

4

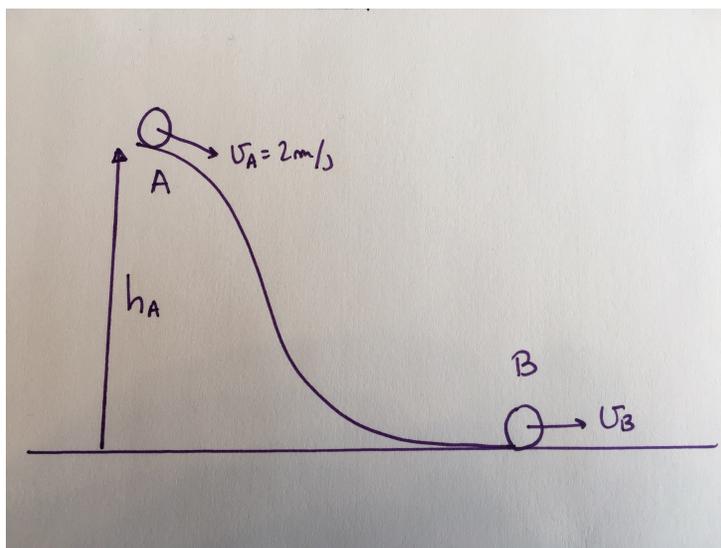
16

$\sqrt{8}$

17. Multiple Choice: Chapter 6: A block of mass 10 Kg...

Points: 2

Question Chapter 6: A block of mass 10 Kg is sliding on a frictionless ramp from A at height $h_A=12$ m to B at height $h_B=0$. The velocity at A is $v_A=2$ m/s and the total mechanical energy at B is $E = 10$ J. What is the velocity at point B:



Answer 2 m/s

$\sqrt{2} \text{ m/s}$

4 m/s

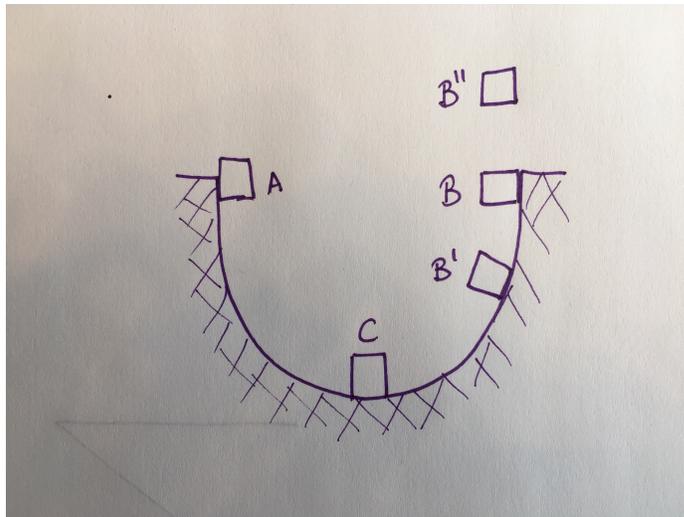
10 m/s

18. Multiple Choice: Chapter 6: A block is dropped with in...

Points:

Question

Chapter 6: A block is dropped with initial zero velocity from point A on a ramp with friction. Consider the following statements: (1) The block will reach the same height at point B. (2) The block will reach at most a smaller height at point B'. (3) The block will reach a larger height at point B''. (4) If the ramp is frictionless, the maximum velocity is reached at point C. Choose the correct answer below:



Answer

Only (1) and (4) are true

Only (2) is true

Only (2) and (4) are true

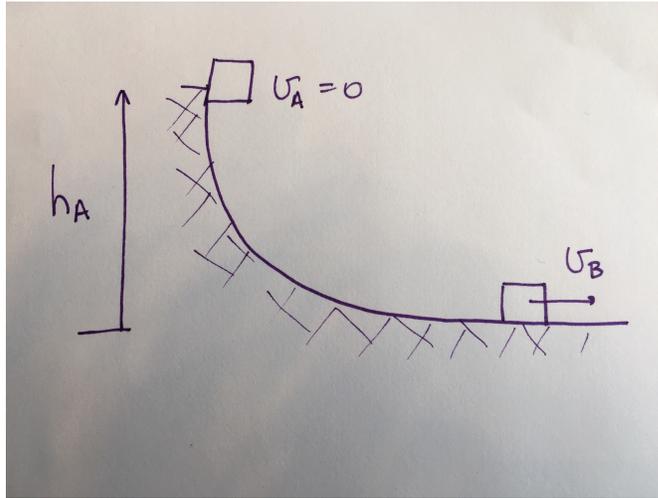
Only (3) and (4) are true.

19. Multiple Choice: Chapter 6: A block slides on a r...

Points:

Question

Chapter 6: A block slides on a ramp from A to B with $v_A=0$ and $h_A=10$ m. The velocity of v_B is:



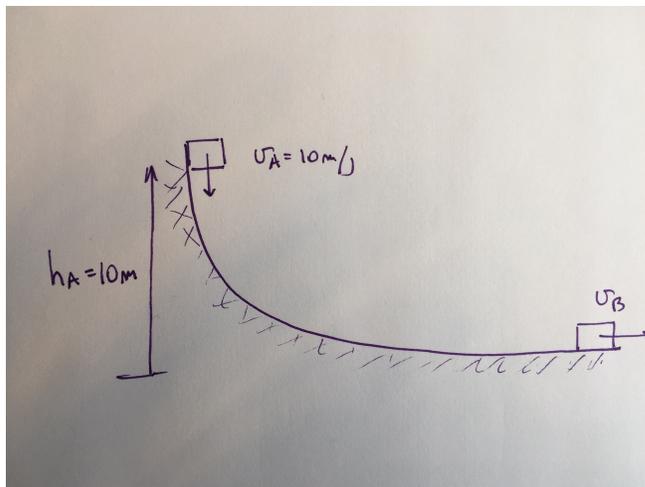
- Answer**
- 18 m/s
 - 12 m/s
 - 196 m/s
 - 14 m/s

20. Multiple Choice: Chapter 6: A block slides on a f...

Points: **2**

Question

Chapter 6: A block slides on a frictionless ramp from A to B with $v_A=10$ m/s and $h_A=10$ m. The velocity v_B is:



- Answer**
- 296 m/s

15.3 m/s

10.2 m/s

 17.2 m/s

Select: All None Select by Type:

Delete and Regrade

Points

Update and Regrade

Hide Question Details

← OK