

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

**PHYSICAL SETTING
PHYSICS**

Tear Here

ANSWER SHEET

Student Momentum Key Sex: Male Female Grade
Teacher School

Record your answers to Part A on this answer sheet.

Part A

- 1 3
- 2 3
- 3 1
- 4 4
- 5 2
- 6 3
- 7 3
- 8 2
- 9 1
- 10 1
- 11 1

Part A Score

Write your answers to Part B-2

The declaration below should be signed when you have completed the examination.

I do hereby affirm, at the close of this examination, that I had no unlawful knowledge of the questions or answers prior to the examination and that I have neither given nor received assistance in answering any of the questions during the examination.

Tear Here

Signature

**PHYSICAL SETTING
 PHYSICS**

ANSWER BOOKLET

Student Sex: Male Female
 Teacher.....
 School..... Grade

Answer all questions in Part B-2 . Record your answers in this booklet.

Part	Maximum Score	Student's Score
A	11	
B-1	0	
B-2	5	
C	0	
Total Written Test Score (Maximum Raw Score: 16)		<input type="text"/>
Final Score (From Conversion Chart)		<input type="text"/>
Raters' Initials:		
Rater 1		Rater 2.....

Part B-2

12-13
G u
 $F_{net} = -6000\text{ N}$ t
 $m = 1200\text{ kg}$ Δp
 $v_i = 10 \frac{\text{m}}{\text{s}}$
 $v_f = 0 \frac{\text{m}}{\text{s}}$

$J = F_{net} \cdot t = \Delta p \Rightarrow t = \frac{\Delta p}{F_{net}}$
 $\Delta p = m \Delta v$
 $\Delta p = (1200\text{ kg})(-10 \frac{\text{m}}{\text{s}})$
 $\Delta p = -12000 \frac{\text{kg m}}{\text{s}}$

$t = \frac{-12000 \frac{\text{kg m}}{\text{s}}}{-6000\text{ N}}$
 $t = 2\text{ s}$

14-15
G u
 $F_{net} = 600\text{ N}$ t
 $J = 3.6\text{ N}\cdot\text{s}$

$J = F_{net} \cdot t$
 $t = \frac{J}{F_{net}}$
 $t = \frac{3.6\text{ N}\cdot\text{s}}{600\text{ N}}$

$t = .006\text{ s}$

For raters only

12

13

14

15

Part B-2

16

$$P_{\text{tot}} = P_1 + P_2$$

$$P_{\text{tot}} = m_1 v_1 + m_2 v_2$$

$$P_{\text{tot}} = (7.28 \text{ kg})(8.5 \frac{\text{m}}{\text{s}}) + (5.45 \text{ kg})(-10 \frac{\text{m}}{\text{s}})$$

$$P_{\text{tot}} = 7.38 \frac{\text{kg} \cdot \text{m}}{\text{s}}$$

G

$$m_1 = 7.28 \text{ kg}$$

$$v_1 = 8.5 \frac{\text{m}}{\text{s}}$$

$$m_2 = 5.45 \text{ kg}$$

$$v_2 = -10 \frac{\text{m}}{\text{s}}$$

U P_{tot}

16



