

Kingdom Saudi Arabia

Riyadh

Imam Mohammed bin Saud University

College of science

101 phys (General Physics)



المملكة العربية السعودية

الرياض

جامعة الامام محمد بن سعود الاسلامية

كلية العلوم الطبيعية

١٠١ فيز (فيزياء عامة)

الاسم: الرقم الجامعي رقم الشعبة

Write your final answer in the table

Question	1	2	3	4	5	6	7	8	9	10
Answer										

تعليمات هامة:

١) يمنع استخدام القاموس الإلكتروني (المترجم أو ما يسمى بالأطلس)

٢) الكتابة بالحبر و ليس القلم الرصاص

٣) يمنع استخدام الجوال او الاجهزة اللوحية كآلة حاسبة

٤) يجب كتابة الإجابة النهائية في الجدول أعلاه

مع تمنياتنا لکن بالتوفيق

Part I: Choose the correct answer:

1- Which of the following quantity is vector :

- A. distance
- B. time
- C. weight
- D. mass

2- A particle moves along the x axis from x_i to x_f . Of the following values of the initial and final coordinates, which results in the displacement with the largest magnitude?

- A. $x_i = 4\text{m}$, $x_f = 6\text{m}$
- B. $x_i = -4\text{m}$, $x_f = -8\text{m}$
- C. $x_i = -4\text{m}$, $x_f = 2\text{m}$
- D. $x_i = -4\text{m}$, $x_f = 4\text{m}$

3- The coordinate of a particle in meters is given by $x(t) = 16t - 3.0t^3$, where the time t is in seconds. The particle instantaneous acceleration at $t = 1\text{s}$ is :

- A. 9 m/s
- B. -9 m/s
- C. 7 m/s
- D. -7 m/s

4- If $\mathbf{A} = (6\text{m})\hat{i} - (8\text{ m})\hat{j}$ then $4\mathbf{A}$ has magnitude:

- A. 10m
- B. 20m
- C. 30m
- D. 40m

5- The angle between $\vec{A} = (-25\text{ m})\hat{i} + (45\text{ m})\hat{j}$ and the positive x axis is:

- A. 29°
- B. 61°
- C. 119°
- D. 151°

6- If $\vec{A} \cdot \vec{B} = 4m$ and the angle between two vectors \vec{A} and \vec{B} is 60° , where the magnitude of \vec{A} is $2m$. The magnitude of \vec{B} is :

- A. $4m$
- B. $2m$
- C. $1m$
- D. $8m$

7- An object is shot vertically upward. While it is rising:

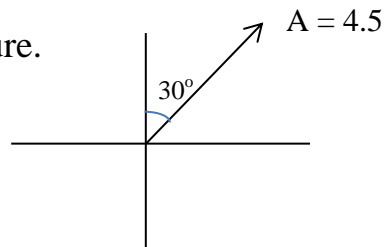
- A. its velocity and acceleration are both upward
- B. its velocity is upward and its acceleration is downward
- C. its velocity and acceleration are both downward
- D. its velocity and acceleration are both decreasing.

8- A stone is thrown vertically upward with an initial speed of 19.5 m/s . It will rise to a maximum height of: ($g = 9.8$)

- A. 4.9 m
- B. 9.8 m
- C. 19.4 m
- D. 38.8 m

9- If vector \vec{A} of 4.5 unit as in figure.

- A. $A_x = 3.9, A_y = 2.25$
- B. $A_x = 2.5, A_y = 3.9$
- C. $A_x = -3.9, A_y = 2.25$
- D. $A_x = 2.25, A_y = -3.9$



10- If an object takes 3sec to reach the maximum height of a building .Which time it takes from the maximum height to reach the ground?

- A. 3sec
- B. -3sec
- C. 0sec
- D. -6sec

Part II: Answer the following questions:

- 1- An object is thrown straight up from ground level with a speed of 50 m/s. If ($g = 9.8 \text{ m/s}^2$) What is a distance above ground level 1.0 s later ?
- 2- An object starts from rest at the origin and moves along the x axis with a constant acceleration of 4m/s^2 . What Its average velocity as it goes from $x = 2\text{m}$ to $x = 8\text{m}$?

3- If vector A is 5 Km at north and vector B is 13 km at north of east, what is the magnitude of resultant vector?

Best wishes