1.1 Physical Quantities & Units

Question Paper

Course	CIE A Level Physics (9702) 2019-2021
Section	1. Physical Quantities & Units
Topic	1.1 Physical Quantities & Units
Difficulty	Easy

Time allowed: **10**

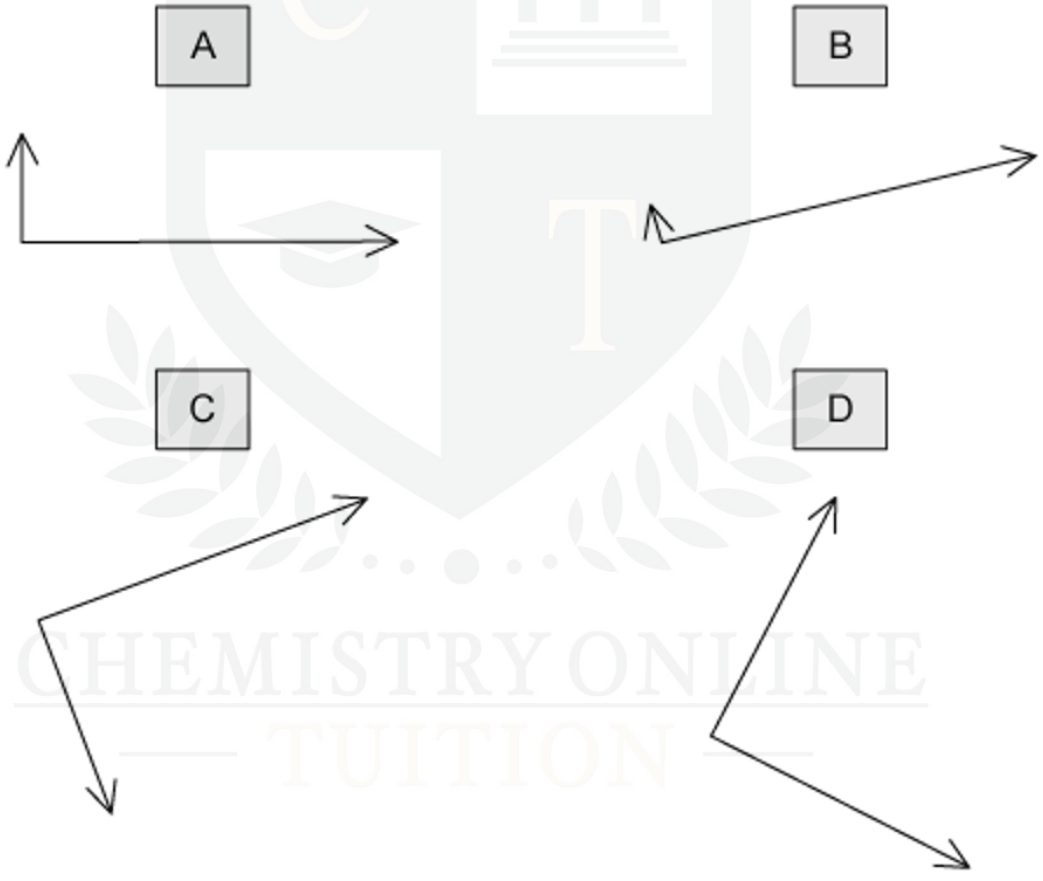
Score: **/10**

Percentage: **/100**

Question 1

The arrow represents the vector **R**.

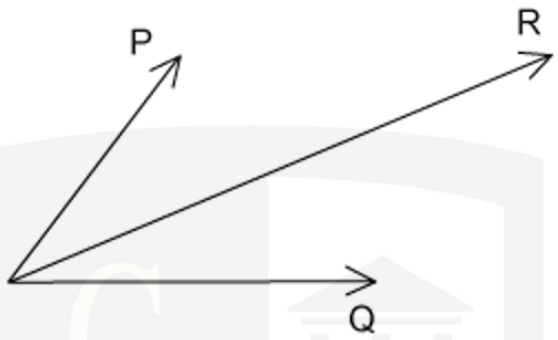
Which diagram does **not** represent **R** as two perpendicular components?



[1 mark]

Question 2

Two physical quantities **P** and **Q** are added together. The sum of **P** and **Q** is **R**, as shown in the diagram.



Which quantity could be represented by **P** and by **Q**?

A kinetic energy

B power

C speed

D velocity

[1 mark]

Question 3

Which quantity can be measured in electronvolts (eV)?

A electric charge

B electric potential

C energy

D power

[1 mark]

Question 4

Which statement includes a correct unit?

A energy = 7.8 Ns

B force = 3.8 Ns

C momentum = 6.2 Ns

D torque = 4.7 Ns

[1 mark]

Question 5

Which pair contains one vector and one scalar quantity?

A	displacement	acceleration
B	force	kinetic energy
C	momentum	velocity
D	power	speed

[1 mark]

Question 6

Which product-pair of metric prefixes has the greatest magnitude?

A pico × mega

B nano × kilo

C micro × giga

D milli × tera

[1 mark]

Question 7

What is a reasonable estimate of the average gravitational force acting on a fully grown woman standing on the Earth?

A 60 N **B** 250 N **C** 350 N **D** 650 N

[1 mark]

Question 8

Five energies are listed below.

5 kJ

5 mJ

5 MJ

5 nJ

Starting with the smallest first, what is the order of increasing magnitude of these energies?

A 5kJ → 5 mJ → 5 MJ → 5nJ

B 5nJ → 5 kJ → 5MJ → 5 mJ

C 5nJ → 5 mJ → 5kJ → 5 MJ

D 5 mJ → 5nJ → 5kJ → 5 MJ

[1 mark]

Question 9

Which definition is correct and uses only quantities rather than units?

A density is mass per cubic metre

B potential difference is energy per unit current

C pressure is force per unit area

D speed is distance travelled per second

[1 mark]

Question 10

Which of the following is an SI base unit?

A current

B gram

C Kelvin

D volt

[1 mark]