

Effects of Forces

Question Paper

Course	CIE IGCSE Physics
Section	1. Motion, Forces & Energy
Topic	Effects of Forces
Difficulty	Hard

Time Allowed 10

Score /5

Percentage /100

Question 1**Extended tier only**

A skydiver is falling at terminal velocity. He has not yet opened his parachute.

He opens his parachute.

What is the direction of both the velocity of the skydiver, and his acceleration?

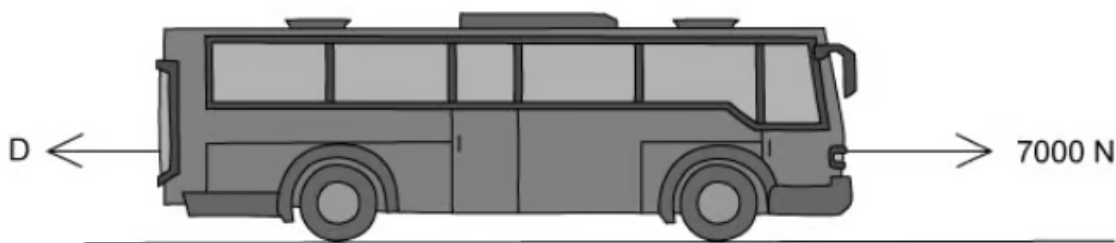
	Direction of the skydiver's velocity	Direction of the skydiver's acceleration
A	upwards	upwards
B	upwards	downwards
C	downwards	upwards
D	downwards	downwards

[1 mark]

Question 2**Extended tier only**

A bus drives along a flat road. Its engine produces a forward driving force of 7000 N. Drag forces, D also act on the bus.

The bus has an acceleration of 1.2 m/s^2 and a mass of 2500 kg.



What is the value of D ?

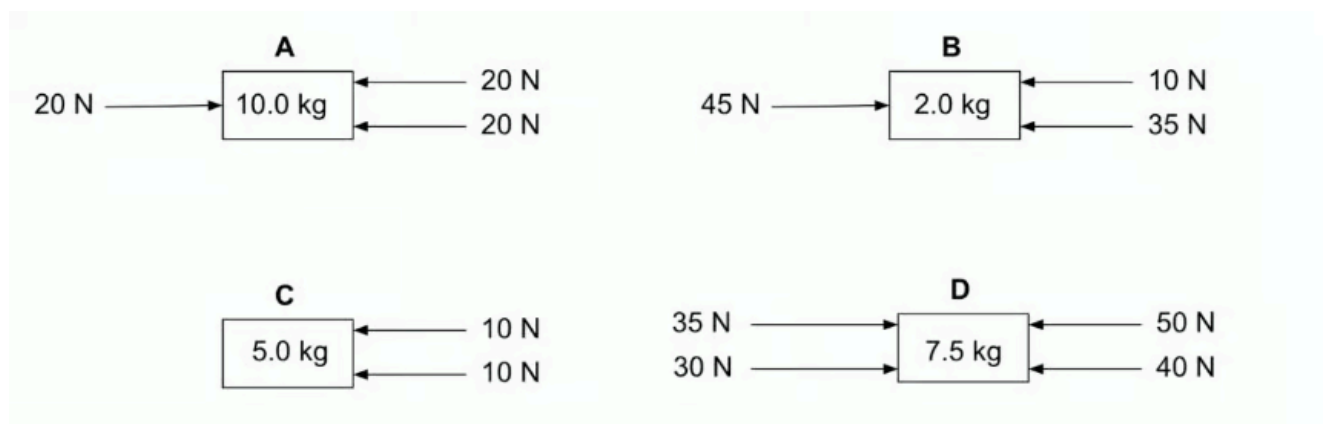
- A. 3000 N
- B. 4500 N
- C. 4917 N
- D. 4000 N

[1 mark]

Question 3

The diagram shows four objects, each with a different mass. Each object is acted on by the forces shown.

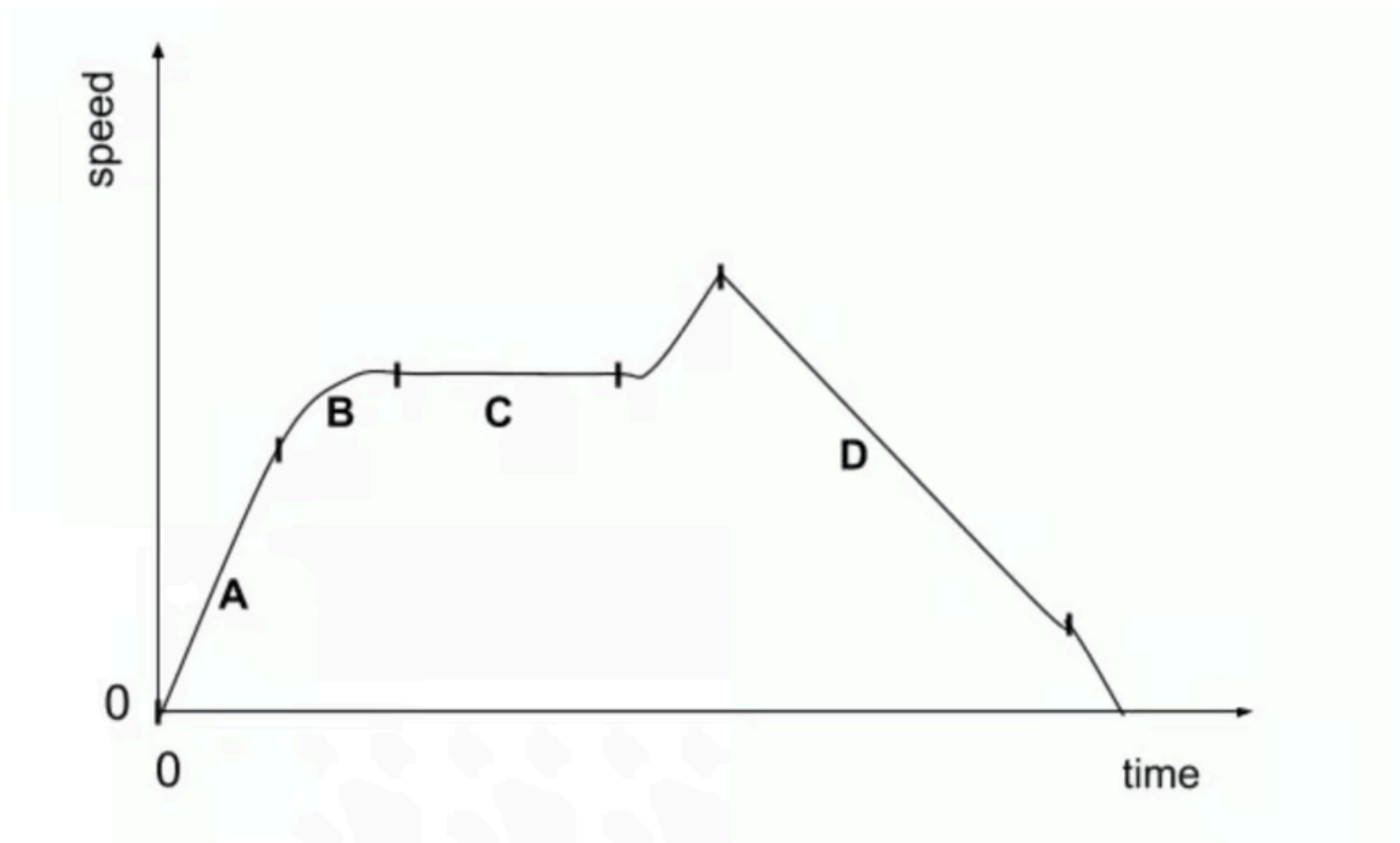
Which object will experience the largest magnitude of acceleration?



[1 mark]

Question 4

The graph below shows the journey of a truck along a straight, flat road.



During which part of the journey is the resultant force on the truck equal to zero?

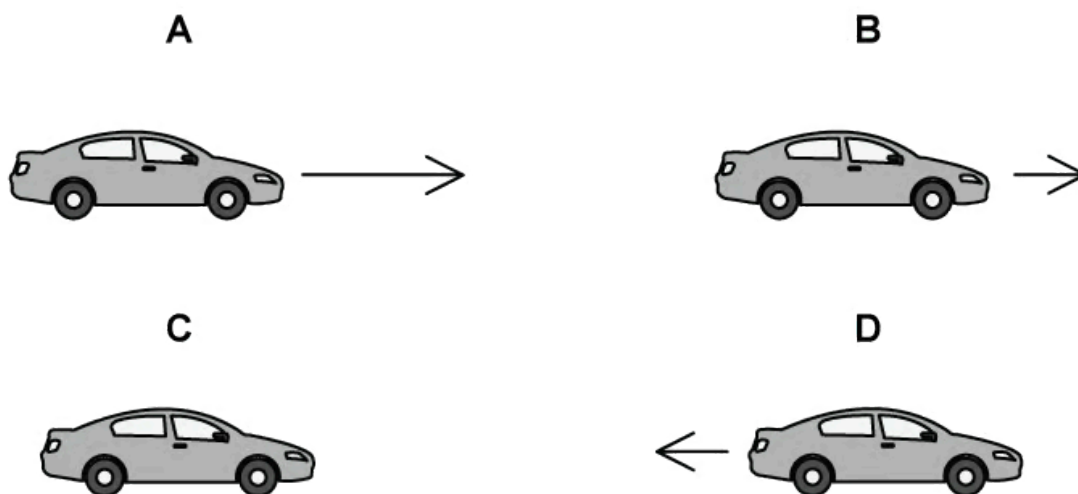
[1 mark]

Question 5

A car is driving on a motorway at a constant speed of 70 miles per hour.

The driver notices a queue of traffic up ahead and begins to slow down.

Which diagram best describes the resultant force acting on the car as it slows down?



[1 mark]