Practice Question Set For GCSE
Subject : Physics
Paper-1 Topic : 2_Motion and Forces

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Name of the Student:_____
Max. Marks : 18 Marks **Time : 18 Minutes**

Q1.

* After going to the shops, a car driver places a bag of shopping on the passenger seat. During the journey home, the driver has to use the brakes to stop very suddenly. The driver is wearing a seat belt.

Explain what happens next to the car, the driver and the shopping bag.

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Q2.

(a) A car is travelling along a level road.



(i) Complete the sentence by putting a cross (☒) in the box next to your answer.

When the velocity of the car is constant, the force of friction on it is

(1)

☒ **A** zero
☒ **B** greater than the driving force
☒ **C** smaller than the driving force

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☒ **D** the same size as the driving force

(ii) The car now accelerates in a straight line.
Its average acceleration is 12 m/s^2.

Calculate the increase in velocity of the car in 4.0 s.

(3)

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(b) This table shows data about two other cars.

car	mass	time taken to reach 30 m/s from rest
family car	1400 kg	10 s
sports car	600 kg	5 s

The owner of the family car claims that although the sports car has greater acceleration, it produces a smaller accelerating force than his family car.

Explain how these figures support his claim.

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*(c) After going to the shops, a car driver places a bag of shopping on the passenger seat. During the journey home, the driver has to use the brakes to stop very suddenly. The driver is wearing a seat belt.

Explain what happens next to the car, the driver and the shopping bag.

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(Total for Question = 12 marks)

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