Question Paper

Topic 1: Mechanics

Q1. A car of mass 1200 kg accelerates from rest to a speed of 20 m/s in 10 seconds. Calculate the average acceleration of the car.
Answer: 2 m/s^2
Explanation: Acceleration = change in velocity / time taken = (20 m/s - 0 m/s) / 10 s = 2 m/s^2

Q2. If a force of 50 N is applied to an object of mass 10 kg, what is the acceleration produced?
Answer: 5 m/s^2
Explanation: Acceleration = Force / Mass = 50 N / 10 kg = 5 m/s^2