Physics – Quiz 5 (10 marks)

Student's Name: _____

Grade 9ᵗʰ

مدارس البكالوريا

BACCALAUREATE SCHOOLS

30ᵗʰ November, 2025
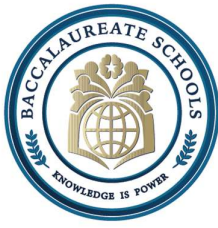
Q1) Complete the following:

Inertia law states that: _____.

The formula for newton's second law is _____.

The SI unit of measure for force is _____ and the SI unit of measure for mass is _____.

Newton's third law of motion states that for every action there is a _____ which

are equal in _____ and opposite in _____.

Q2) What is the rate of acceleration of a 2,000-kilogram truck if a force of 4,200 N is used to make it start moving forward?

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Q3) A 7.26kg bowling ball (16 pounds) is at rest at the end of a bowling lane. Use this information to answer the following questions.

a. What is the net force acting on the ball?

b. You push the ball with a force of 22.8N which induces a -2.3N frictional force. What is the net force while you push the ball?

c. What is the acceleration caused by your push on the ball?

d. Following your push the ball rolls down the lane at 4.2m/s. What is the net force on the ball as it rolls down the lane at the constant speed?

e. How long did you push the ball in this situation?