Physics – Quiz 3 (10 marks)

Student's Name: _____

Grade 9th

مدارس البكالوريا

BACCALAUREATE SCHOOLS

27th October, 2025

**Q1) Define the following:**

Free Falling Object is _____

Gravity acceleration is _____

**Q2) Complete the following:**

When tossing an object up in the air the velocity at maximum height is _____ and the acceleration is _____.

The slope of the line in a velocity-time graph represents _____.

The area under a velocity-time graph represents _____.

**Q3) Your friend throws a rock straight downward off a cliff with an initial speed of 12.0 m/s. Using a stopwatch, you determine the rock takes 2.80 s to hit the ground. How high is the cliff?**

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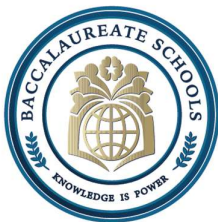
**Q4) A high jumper needs to clear a bar 1.60 m above the take-off point. Calculate the minimum vertical speed the jumper must have as they leave the ground.**

**Q5)** An astronaut on the Moon drops an object from rest. A height sensor records the position of the object (relative to the drop point) at the times shown. **Complete the table by calculating the velocity at each listed time** using the change in position between successive measurements. *Then determine the acceleration due to gravity on the Moon from your computed velocities.*

| Time (s) | Position (m) | Velocity (m/s) |
|----------|--------------|----------------|
| 0.0000 | 0.0000 | |
| 0.1000 | −0.0081 | |
| 0.2000 | −0.0324 | |
| 0.3000 | −0.0729 | |
| 0.4000 | −0.1296 | |