2023 Ph H1 Q1

Section: Our Dynamic Universe
Topic: Motion, Equations and Graphs

Question Summary

A cyclist travels along a straight, level road.
The **v–t graph** of the motion is given.
Which pair of **s–t** and **a–t** graphs (A–E) matches this motion?

✅ Final Answer:

A

Working

- The v–t graph is **horizontal** (constant velocity).

- **s–t graph:** Constant velocity → straight line with positive gradient.

- **a–t graph:** Zero acceleration → horizontal line at 0.

- Only **pair A** matches these conditions.

Quick Tips

- Constant velocity → s–t graph is linear.

- Zero acceleration → a–t graph is a flat line at zero.