

12 The following passage is taken from an article about the history of particle physics.

### Mystery Particle

By 1932 scientists knew of the existence of the subatomic particles the electron, the proton and the neutron. These were believed to be the fundamental particles.

In 1936 scientists were using tracks of cosmic rays to identify a predicted particle known as a meson. Instead, another particle was discovered, the muon. This was so surprising that Nobel Prize winning physicist Isidor Rabi said “Who ordered that?”

Describe how the underlined particles fit into the standard model.

(Total for Question 12 = 6 marks)