

13 In 1964 George Zweig proposed a model for matter.

Zweig suggested that mesons and baryons are made from a set of fundamental particles he called aces. In this model each ace carried baryon number $1/3$ and was fractionally charged. Baryons were a combination of three aces and mesons were a combination of two aces. Zweig said that the number of aces should match the number of leptons, so there would be four types of ace.

Compare this model with the current standard model.

(4)

(Total for Question 13 = 4 marks)