

38 An up quark in a hadron changes to a down quark.

The elementary charge is e .

What is the magnitude of the change in the charge of the hadron?

- A** $\frac{1}{3}e$ **B** $\frac{2}{3}e$ **C** e **D** zero

40 A hadron consists of antiquarks that are all identical.

What is a possible value, in terms of the elementary charge e , for the charge on the hadron?

- A** $0e$ **B** $+1e$ **C** $+2e$ **D** $+3e$

40 How many flavours (types) of antiquark are there?

- A** 3 **B** 4 **C** 5 **D** 6

37 What is a general description of a baryon?

- A** It consists of three quarks that **must** all be the same flavour.
B It consists of three quarks that do **not** need to be the same flavour.
C It consists of two quarks that **must** both be the same flavour.
D It consists of two quarks that do **not** need to be the same flavour.

40 What is the charge, in terms of the elementary charge e , on a charm quark?

- A** $-\frac{2}{3}e$ **B** $-\frac{1}{3}e$ **C** $+\frac{1}{3}e$ **D** $+\frac{2}{3}e$