

GCSE Physics B (Twenty First Century Science)
J259/01 Breadth in Physics (Foundation Tier)

Question Set 13

- 1 A toothbrush uses a rechargeable battery.
- (a) The energy that is stored in the battery comes from a power station.
- State how the energy is transferred from the power station to the chemical store in the battery. [1]
- (b) The potential difference across the battery is 1.2V.
- During a typical use, 360C of charge moves through the toothbrush motor over a time of 2 minutes.
- (i) Calculate the total energy transferred by the toothbrush in one day if it is used **two** times a day.
- Energy transferred = J [3]
- (ii) Calculate the current in the toothbrush when used for 2 minutes each time.
- Current = A [4]

Total Marks for Question Set 13: 8

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