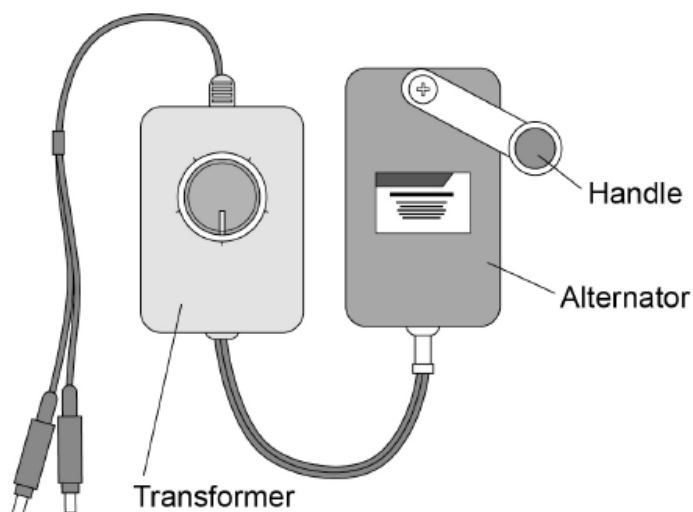


AQA - Electromagnetic induction – GCSE Physics

1. June/2020/Paper_2H/No.7

0 7

Figure 10 shows a portable power supply.

Figure 10

0 7 . 1

The portable power supply has an alternator connected to a transformer.

The transformer can be adjusted to have different numbers of turns on the secondary coil.

Suggest why.

[2 marks]

07.2 A lamp is connected to the power supply.

The lamp requires an input potential difference of 5.0 V.

The alternator generates a potential difference of 1.5 V.

The primary coil of the transformer has 150 turns.

Calculate the number of turns needed on the secondary coil.

[3 marks]

Number of turns on the secondary coil = _____

0 7 . 4

Suggest the purpose of the slip rings.

[1 mark]

0 7 . 5

The alternator from the portable power supply is disconnected from the transformer and lamp.

Explain why the handle of the alternator becomes much easier to turn.

[3 marks]
