

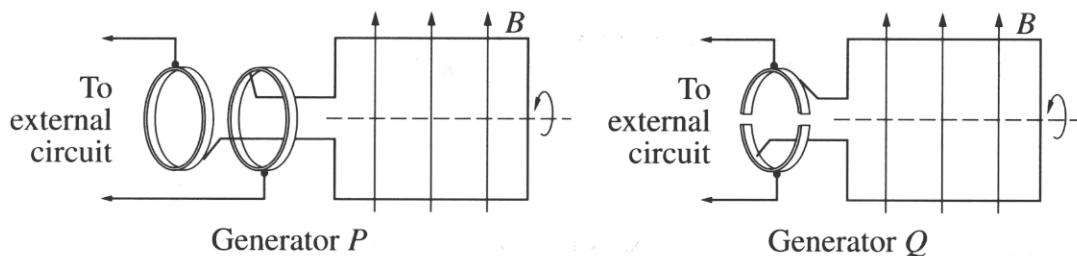
2002 HIGHER SCHOOL CERTIFICATE EXAMINATION
Physics

Section I – Part B (continued)

Marks

Question 22 (6 marks)

Two types of generator are shown in the diagram.

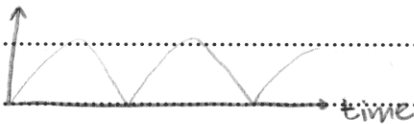


- (a) What is the function of the brush in a generator? 1

The brush provides good contact with the coils and facilitates the transfer of generated electricity into the outgoing wires.

- (b) Which of these generators is a DC generator? Justify your choice. 3

Generator Q is a DC generator because it utilises a split ring commutator which reverses the current direction every $\frac{1}{2}$ revolution.



This is equivalent to DC current.

- (c) Outline why AC generators are used in large-scale electrical power production. 2

AC generators are used in large-scale electrical power production because AC power is easy to transmit over a power grid and into homes and industrial applications. AC power is the standard delivered to all power outlets ^{everywhere} hence the necessity to ~~to~~ produce it on a large-scale.