

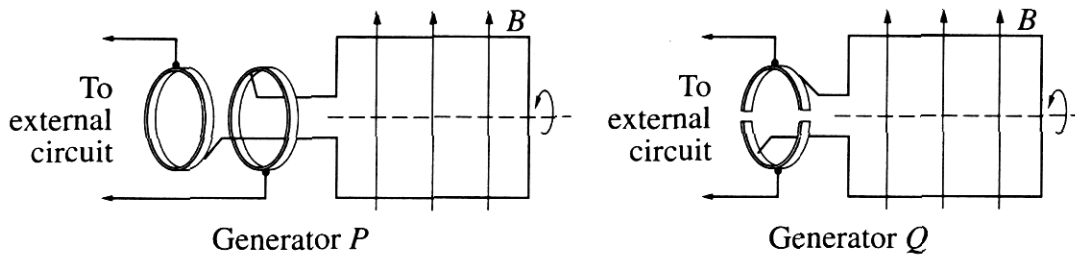
2002 HIGHER SCHOOL CERTIFICATE EXAMINATION
Physics

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
 To keep contact with the rings to provide a complete circuit.
- (b) Which of these generators is a DC generator? Justify your choice. 3
 Generator Q. A DC generator requires a split-ring commutator. Since the current in a generator is reversed every half-turn, the split-rings ensure a reversal of the coil's position, reversing the current again to provide an always-positive current.
- (c) Outline why AC generators are used in large-scale electrical power production. 2
 Since AC induction generators are much more simple and efficient than DC generators. Also, AC voltage can be conveniently stepped-up through AC-ran transformers, allowing for smaller power loss over long transmission through wires.