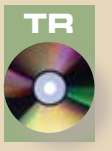
MOTORS AND GENERATORS: REVIEW QUESTIONS



Verb scaffolds
Sample answers and marking criteria

Working with the HSC verbs

1. Define the 'motor effect'.
2. Outline Faraday's law of electromagnetic induction.
3. Identify two applications of eddy currents.
4. Outline two disadvantages of a DC electric generator.
5. Explain why AC voltage is the required power input for a transformer.
6. Explain the importance of radial magnets for the proper function of a galvanometer.
7. Compare the role of the split ring commutator used in a DC motor to that in a DC generator.
8. Describe the experiment performed by Michael Faraday to demonstrate the generation of an electric current using moving magnets.
9. Analyse how an electric motor can be modified to operate as an electric generator and how a generator could be modified to function as a motor.
10. (a) Identify the source of heat loss during the transmission of electricity from the power station to households.
    (b) Describe how this energy loss may be minimised.
11. In the 19th century, George Westinghouse and Thomas Edison were rivals as suppliers of electricity to cities. George Westinghouse eventually won the competition. Explain why Westinghouse' electricity distribution system was superior to Edison's system.
12. Assess the impact of the development of AC generators on the environment.
13. Analyse the physics principles, devices and engineering designs adopted by power plants and their distribution systems to make the production and transmission of electricity safer, more efficient and environmentally friendly.