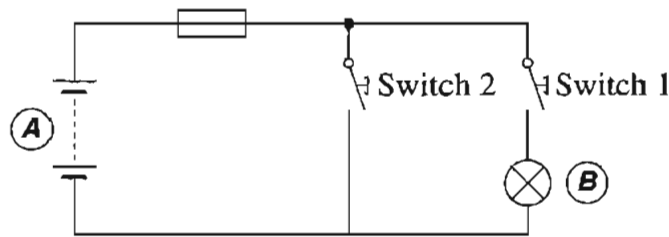


2009 HIGHER SCHOOL CERTIFICATE EXAMINATION  
**Electrotechnology**

Section II (continued)

**Question 19** (7 marks)

An electrical circuit is shown.



- (a) Identify the components **A** and **B**.

	Component	
(i)	<b>A</b> Battery	1
(ii)	<b>B</b> Signal lamp	1

- (b) Describe what will happen if Switch 1 is closed. 2

Current will flow through the Fuse and through the push button switch (SPST). The signal lamp will illuminate.

- (c) Describe what will happen if Switch 1 remains closed and Switch 2 is also closed. 3

If switch 2 is also operated an overcurrent will flow through the fuse ~~and~~ causing it to blow. This in turn isolates the circuit and the lamp will not operate. This switch 2 causes a short across the terminals due to no load in series.