



## WEEKLY HOME STUDY PACKAGE - WEEK 1 (05/07/21 – 09/07/21)

### Year 12 Applied Technology

#### Solution

(10 Marks)

Write a paragraph of about 150- 200 words explaining the four different events that occurs in a two-stroke engine.

#### Events that occurs in a two-stroke engine

An engine is a machine designed to convert one form of energy into mechanical energy. These engines have different events that occurs for the engines to function properly. Thus, the paragraph will discuss the events that occurs in a two stroke engine. Firstly, induction stroke is where the fresh fuel is sucked into the engine through the inlet. The motion of the piston to the fully up position causes a vacuum in the cylinder that draws the fuel in. Thus, the fuel has oil mixed in with it, and at this point the oil acts as a lubricant for the piston thereby removing the need for a sump and oil pump. Secondly in the compression stroke the compressed fuel at the top of the cylinder is ignited by the spark plug. The explosion pushes the piston downwards, driving the crankshaft. It is this stage that provides all the power that moves the engine and the machine connected to it. As the piston moves downwards the burnt fuel starts to exit the engine through the exhaust outlet. At the same time the fresh fuel is starting to be pushed into the top of the cylinder. Moreover, in the power stroke the movement of the fresh fuel into the top of the cylinder helps to expel the old 2 stroke exhaust fumes, but it also means that the two gases are mixing. This result in both some unburnt gases being expelled with the exhaust fumes, as well as some burnt fuel remaining mixed with the fresh fuel. Lastly, in the exhaust stroke the piston returns to the top of its cycle the replacement of burnt fuel with fresh fuel is completed. The fresh fuel, with some burnt gas still mixed in, is compressed and the engine returns to the first position in the sequence.

