| **Year 11 ATAR CHEMISTRY Name:** | |
| --- | --- |
| Task No: | 6b |
| Task Type: | Extended Response Validation Test |
|  |  |
| Content: | Chemical reactions: CO2 emissions |
|  |  |
| Task Description: | Complete the attached questions in the spaces provided.  Test conditions (15 minutes). |
| Total Marks: | 14 |
| Weighting: | 3% |
| Due Date: | 11 May 2020 |



**IMPORTANT NOTE TO CANDIDATES**

No other items may be taken into the examination room. It is **your** responsibility to ensure that you do not have any unauthorised notes or other items of a non-personal nature in the examination room. If you have any unauthorised material with you, hand it to the supervisor **before** reading any further.

1. Compare the production of diesel to biodiesel, in terms of process and sustainability. (4 marks)
2. Identify the main components of the following by name and formula (4 marks)

|  |  |  |
| --- | --- | --- |
|  | Name | Formula |
| 1. Natural gas |  |  |
| 1. Methanol |  |  |

1. Which fuel has the highest energy output per gram? (1 mark)
2. Which fuel has the lowest CO2 emissions per gram? (1 mark)
3. Comment on the validity of assuming complete combustion in determining energy output or carbon emissions. Explain your reason for either accepting or rejecting the assumption. (4 marks)

**End of Test**