**Energetics – Hmk 1 (Ans)**

1. -26.3 kJmol-1 (+ working out) 2

2. a) -193.5 kJmol-1 (+ working out) 2

b) 2.43 g (+ working out) 2

c) 15.2 oC (+ working out) 2

3. +11.1 kJmol-1 (+ working out) 2

4. -118 kJmol-1 (+ working out) 2

5. -56.8 kJmol-1 (+ working out) 2

6. -52.0 kJmol-1 (+ working out) 2

7. a) i) C2H6(g) + 3½O2(g) 🡪 2CO2(g) + 3H2O(l)

ii) C2H4(g) + 3O2(g) 🡪 2CO2(g) + 2H2O(l)

iii) H2(g) + ½O2(g) 🡪 H2O(l) 3

b) i) -1558.9 kJmol-1 (+ working out)

ii) -1009 kJmol-1 (+ working out)

iii) -285.5 kJmol-1 (+working out) 6

8. -152 kJmol-1 (+ working out) 2

9. -49.5 kJmol-1 (+ working out) 2

10. diborane: -2027.4 kJmol-1 (+ working out)

benzene: -3167.9 kJmol-1 (+ working out) 4

11. -277.1 kJmol-1 (+ working out) 2

12. -126.8 kJmol-1 (+ working out) 2

13. -126 kJmol-1 (+ working out) 2

14. a) -75 kJmol-1 (+ working out)

b) -109 kJmol-1 (+ working out)

c) -606 kJmol-1 (+ working out)6

Total out of 45

A = 36

B = 32

C = 27

D = 23

E = 18