

NAME:
RICHARD WATSON

STUDENT NO:
WAT16832630

Page 1

Q1, $\frac{1}{R} = \frac{1}{\frac{1}{2} + \frac{1}{3}} = 1.2$

$$\frac{1}{R} = \frac{1}{2} + \frac{1}{3} + \frac{1}{6} = 1$$

$$R_T = 4 + 1.2 + 1 + 2 = 8.2 \Omega$$

ii, $I_T = \frac{V_T}{R_T}$

TOTAL Resistance = 8.2Ω
TOTAL Voltage = $41V$

$$I_T = \frac{41}{8.2} = 5A$$

iii, $V = R \times I$

$$V_1 = 1.2 \times 5 = 6$$

$$V_2 = 1 \times 5 = 5$$

$$V_3 = 2 \times 5 = 10$$

iv, $P = \frac{V^2}{R} = 205W$