Student ID: _____ Student Name: _____

1) For circuit in Fig 1, **3 marks**

i) Obtain the Norton equivalent to the left of terminals a-b;

ii) Hence use the result to find current i.

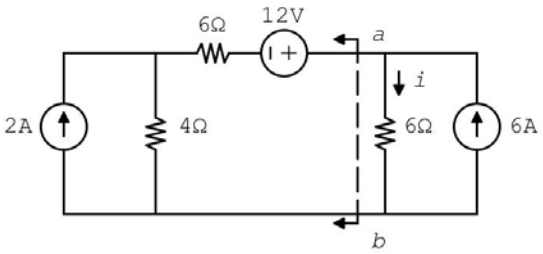

Fig 1

2) By obtaining the Thevenin equivalent of the circuit in Fig 2 seen across R, **3 marks**

i) Determine the value of R for maximum power to be delivered to R

ii) Maximum power delivered

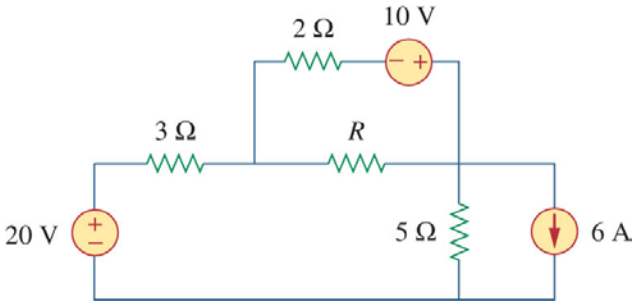

Fig 2

3) For the circuit in Fig 3, find v_1 and v_2. **4 marks**

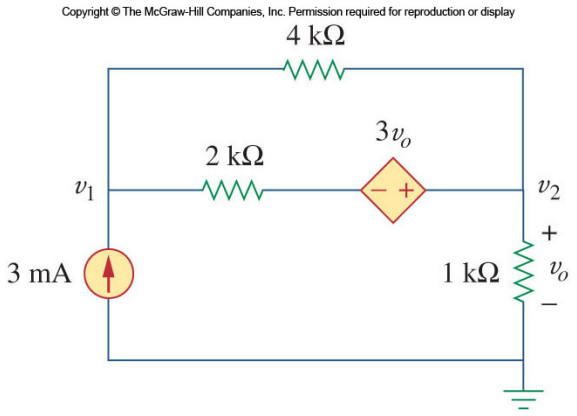

Fig 3

4) Express the following in their polar and Euler forms **3 marks**

i) $2\sqrt{3} + 2j$

ii) $-6 - 6j$

iii) $5 - 5\sqrt{3}j$

5) Calculating following complex number **3 marks**

i) $(8 - 3j) \times (4 + 6j)$

ii) $(3 + 5j)/(8 - 2j)$

iii) $1/(2 - 3\sqrt{3}j)$