ENV202/502 – INTRODUCTORY REMOTE SENSING

Practical Assessment 1

Due: Monday week 4, 11.59pm

Contribution to unit grade: 20%

Format: Short Answer

Length: As required

Late penalty: 10% per day

# Pre-Week

1. Participation in pre-class questions – weeks 2 - 3 (10 points)

# Week 1

1. Summarise the use of remote sensing in your selected application area from the week 1 class (max 300 words, not including references). Don’t forget to reference in your writing (10 points)

# Week 2

1. What is the image pixel size? (1 point)
2. What projection and datum have been used for the image? You may wish to refer back to your notes from ENV101 about the importance of projections and datums (2 points)
3. Which band is the best for determining the outline of coasts and water bodies and why? (2 points)
4. What sorts of features are represented by the two main modes in the histogram? How is the display affected by applying the contrast to the range of only one of these modes? When and why might this be useful? (4 points)
5. What is the feature that is located at and around this co-ordinate? (1 point)
6. What are the differences that you can see in the different bands? (2 points)
7. What is the temperature of the feature identified in section 4.4? (1 point)

# Week 3

1. Which region/s of the EMR spectrum are most sensitive to variations in plant chlorophyll content? How does a change in chlorophyll affect leaf reflectance? (4 points)
2. Which region/s of the EMR spectrum are most sensitive to variations in plant water content? How does a change in water content affect leaf reflectance? (4 points)
3. How could you use the information provided through the Liberty simulations to assist or guide vegetation monitoring? (2 points)
4. Which region/s of the EMR spectrum provides the best discrimination between the different vegetation types select in ENVI spectral libraries? Why? (4 points)
5. Select two minerals and describe the diagnostic features of their spectral curves (4 points)
6. How can a spectral library be used to assist with image acquisition and interpretation? (2 points)
7. Which band / colour gun combination do you think allows for greatest discrimination between different vegetation types and why? (2 points)
8. In which band/s is the difference between your selected features *most* obvious and why? (2 points)
9. In which band/s is the difference between your selected features *least* obvious and why? (2 points)