Module 10 – Homework
Assignment.

Question 10.1 -
Red Color Gun: Color Band 4
Green Color Gun: Color Band 3
Blue Color Gun: Color Band 2

Question 10.2 –
It is a false color composite. This is made by not placing the red, blue and green color bands in their respective color guns. Much of the landscape is red mostly in highly vegetated areas. The Red color gun is using Color Band 4, which picks up the near-infrared electromagnetic spectrum. When vegetation is healthy it has been found to have a strong reflection of near-infrared energy and absorption or red energy. As a result of these factors most of the map is red.

Question 10.3 –
Water: Blue
Vegetated Areas: Red
Urban Areas: Green

Question 10.4 –
This is a true color composite. Is made by placing the red, blue and green color bands in their respective guns. It reflects a view of how it would be seen if you were flying in an airplane looking down.

Question 10.5 –
By looking at an image only in true color composite you would lose the benefit and opportunity of better analysis. For example, vegetation analysis is best done with a standard false color composite to better pick up the infrared spectrum and display water as black. The bright reds and dark black of water provide high contrast and more accurate analysis.

Question 10.6 –
This is another False Color Composite.

Question 10.7 –
Vegetated areas are being shown as purple. This is a result of the Blue Gun displaying with the Red Band (3). The visual distribution of the purple compared to the green is very similar.

Question 10.8 –
Areas between the runways must be heavy and healthy vegetation which has a strong reflection of near-infrared energy which is being displayed in the red gun.

Question 10.9 –
The green gun is now picking up energy in the near-infrared spectrum from band 4. As healthy vegetation has a strong infrared reflection the area between the runways is now bright green.

Question 10.10 –
The blue gun is now picking up energy in the near-infrared spectrum from band 4. As healthy vegetation has a strong infrared reflection the area between the runways is now blue.

Question 10.11 –
Band 6, Thermal Infrared has the highest amount of reflection while bands 5 and 7 (the bands closest to the highest reflectivity) have the greatest amount of absorption. Interestingly thermal infrared is more reflective than the blue band.
Question 10.12 -

Band 6 Thermal Infrared is again the highest amount of reflection while bands 3(Red) and 7(Middle Infrared have the greatest amount of absorption. The second most reflective is Band 4(near-infrared).