

**Benha University**

**Faculty of Engineering \_Shoubra**

**Surveying Engineering Department**

**Fourth Year**

**Year: 2017/2018**

**Semester: One**

**Remote Sensing and Photo Interpretation**

**Assignment No: 4**

**Image Classification**

1. What is Image Classification?
2. Methods of Classification used in GIS Analysis.
3. Define the following terms:
4. Spectral Signature.
5. Signature Evaluation.
6. Minimum Distance Classifier.
7. Maximum Likelihood.
8. Region Grow AOI.
9. Euclidian Distance.
10. Advantage and Disadvantage of Supervised and Unsupervised Classification.
11. Determine areas of continuous spectral response at pixel 5 by region grow AOI, if the Euclidian Distance = (0,1,1,2,3) and Neighborhood = (4,4,8,8,8) respectively.

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| --- | --- | --- | --- | --- | --- |
| 10 | 10 | 10 | 6 | 5 | 4 |
| 9 | 8 | 8 | 7 | 6 | 5 |
| 10 | 10 | 4 | 5 | 7 | 10 |
| 11 | 10 | 4 | 4 | 8 | 9 |
| 10 | 8 | 7 | 6 | 10 | 10 |
| 11 | 3 | 9 | 7 | 10 | 11 |

1. List the different criteria according to which the USGS Classification System was designed.
2. Write in detail about the following:
3. Parallelepiped Decision Rule.
4. Accuracy Assessment of Classification.