**Assignment 1**

Consider the following statements regarding the satellite imaging:

1. The satellite orbit is fixed in the inertial space

2. During successive across-track imaging, the earth rotates beneath the sensor

3. The satellite images a skewed area

Which one of the following is correct regarding the above statements?

(a) 1, 2, 3

(b) 1, 3

(c) 2, 3

(d) 1, 2

**Assignment 2**

Assume a crop type classification has been performed using the Landsat-OLI satellite. Subsequently, the classification result is being evaluated by means of a field survey.

The result is as follows:

Of the 25000 potato pixels, 15000 were classified correctly as potatoes, 1250 as wheat and 8750 as cabbage.

Of the 50000 wheat pixels, 40000 were classified correctly as wheat, 5000 as potatoes and 5000 as cabbage.

Of the 25000 cabbage pixels, 16500 were classified correctly as cabbage, 6000 were classified as potatoes and 2500 as wheat.

Perform the following tasks/calculations:

* Make the confusion matrix.
* Calculate for each class the classification accuracy and reliability.
* Calculate the overall classification accuracy.
* Calculate the overall classification accuracy

**Assignment 3**

You have created a wildfire map from a Sentinel 2 image of a Khosrov Preserve in Armenia. The resulting image product did not overlay a topographic map of the area. Identify the problem with the image product and a potential source of the problem.