



# **Tshwane University of Technology**

*We empower people*

**Environmental Earth Studies II**

**08 May 2023**

**EVE206D**

**Semester Test I**

**National Diploma: Environmental Sciences**

**Lecturer: Mr S.G Sibeko**

## **Question 1**

- 1.1 List the groups into which minerals can be classified on the basis of:
  - 1.1.1 Their application. (4)
  - 1.1.2 Appearance in visible light (2)
- 1.2 Name the PHYSICAL PROPERTIES that are used to identify minerals. (9)
- 1.3 List the various crystal systems and also the minerals associated with each crystals system. (6)

## **Question 2**

- 2.1 List the minerals that are found in the following groups:
  - 2.1.1 Oxide Group (3)
  - 2.1.2 Barite Group (3)
- 2.2 Describe the environmental/mining implications of the following groups of minerals:
  - 2.2.1 Sulphates (3)

2.2.2 Hydroxides (2)

2.2.3 Sulphides (2)

2.2.4 Phosphates (3)

### **Question 3**

3.1 Name the three groups of the silic rock forming mineral family and also give at least two minerals for each group (6)

3.2 Discuss the three sub-groups of clay mineral group. (6)

### **Question 4**

4.1 List the five most abundant silicate minerals on earth. (5)

4.2 With aid of sketches describe the seven classes into which silicates are divided into on the basis of their structure (6)

**Total Marks: 60 Marks**