Uva Wellassa University of Sri Lanka
Faculty of Science and Technology
Department of Science and Technology
200 level 1st Semester Examination – Jan. / Feb. 2016
MRT 213-2 Mineralogy and Petrology II

Uva Wellassa University

Instructions to candidates
Duration: 02 hours
Number of questions: 04
Answer all Questions
Mark allocation: 400 marks

1.

a. Distinguish between isotropic and anisotropic minerals.
b. Briefly describe the principle and operation of a polarizing petrographic microscope.
c. Describe relief, pleochroism and extinction as observed in a mineral thin section under the polarizing microscope.
d. How do you determine the 2V angle of a mineral?

(100 mark)

2.

a. Describe the different stages in sedimentary rock formation.
b. Provide a classification scheme for sedimentary rocks.
c. Discuss the stability of minerals with reference to Bowen's reaction series.
d. Describe pro-grade and retrograde metamorphism.

(100 mark)

3. Compare and contrast following.

a. Plutons and batholiths
b. Dykes and sills
c. Schist and phyllite
d. Limestone and marble
e. Regional and contact metamorphism

(100 mark)

29

4.

a. How can you determine the top-bottom relationships in a deformed sedimentary rock sequence? Illustrate your answer with examples.

b. What is metamorphic facies? Briefly explain how you would determine the metamorphic grade of a rock.

c. Distinguish between mineral lineation and stretching lineation.

d. Describe the process of pegmatite emplacement. Discuss the economic importance of pegmatites.

(100 mark)