



UNIVERSITY OF MINES AND TECHNOLOGY, TARKWA

SECOND SEMESTER EXAMINATIONS, MAY 2018

COURSE NO: MN 274
COURSE NAME: ALLUVIAL AND OCEAN MINING
CLASS: MN II TIME: 2½ HOURS

Name: _____ Index Number: _____

Answer all Questions

(100 Marks)

Give a Detailed but Concise Answers to the following Questions

1. The ocean floor is geographically divided into the following zones: Continental shelf; Continental slope; Continental rise; Abyssal plains; Deep sea ridges; and trenches. Draw a section of the ocean floor and show these features. **(15 marks)**
2. Select one type of marine mineral deposit
 - (a) Mention at least two (2) minerals to be obtained from such deposit
 - (b) Mention at least three (3) uses of the minerals
 - (c) Outline where the industry stands now
 - (d) Outline some pressing issues confronting the industry
 - (e) What is the future projection of the industry?
 - (f) How do we get there? **(30 marks)**
3. As an upcoming Mining Engineer, present one design of an environmentally friendly alluvial mining method. **(20 marks)**
4. Draw a basic flowchart for alluvial mineral processing and describe the function of each stage. **(15 marks)**
5. The European Union sponsored a Ghana Mercury Abatement Project which led to the development of the Direct Smelting Kit by the University of Mines and Technology referred to as the *Sika Bukyia*. This mercury-free process has been adjudged by the United Nations Environment Programme (UNEP) to be one of the best methods available for small-scale gold extraction in the world. Write a short communiqué to the Minister of Lands and Natural Resources outlining the operating principles of this method and strategies that will promote its use by Ghanaian small-scale miners. **(20 marks)**

Course Examiners: Assoc Prof Peter Arroja Eshun