



UNIVERSITY OF MINES AND TECHNOLOGY, TARKWA

FIRST SEMESTER EXAMINATIONS, NOV. – DEC. 2018

COURSE NO: GL 371 Unihubgh.com
COURSE NAME: ECONOMIC GEOLOGY AND INDUSTRIAL MINERALS
CLASS: GL III **TIME:** 3 HRS

Name: _____ Index Number: _____

ANSWER ALL THE QUESTIONS

1a. What is a hydrothermal deposit? Give the essential factors for the formation of hydrothermal deposit and list 4 characteristic features of a hydrothermal deposit.

(20 marks)

1b. Mention the types of hydrothermal fluids and describe each and how they help in the deposition of metals.

(16 marks).

1c. What is the difference between metasomatism and metamorphism?

(4 marks)

2a. What is pyrometasomatism? Provide five characteristic features associated with pyrometasomatic deposits.

(5 marks)

2b. Explain how supergene enrichment of deposits occur.

(5 marks)

2c. List and explain 4 factors controlling and limiting oxidation in supergene enrichment.

(5 marks)

2d. What metals or minerals could be derived from these ore minerals?

Galena, Chalcocite, Sphalerite, Bornite and Sylvanite

(5 marks)

3a Define the following terms:

- | | |
|---------------------|--------------------------------|
| i. Petrification | vi. Paragenesis |
| ii. Skarn deposit | vii. Mineral Resource |
| iii. Geothermometry | viii. Magmatic Defferentiation |
| iv. Zoning | ix. Indicator Mineral |
| v. Crustiform | x. Cutoff grade |

(10 marks)

3b. Explain the 3 major stages of geochemical survey in exploration

(10 marks)

E. B. Fiadonu (Mrs.) / M. Fareed