



**UNIVERSITY OF MINES AND TECHNOLOGY, TARKWA**

**FIRST SEMESTER EXAMINATIONS, NOV/DEC 2018**

**COURSE NO:** GL/GM/MR/ES 261

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**COURSE NAME:** INTRODUCTION TO MINING

**CLASS:** GL/GM/MR/ES II

**TIME: 3 HOURS**

Name: \_\_\_\_\_ Index Number: \_\_\_\_\_

*Answer All Questions*

1. Explain the difference between prospecting and exploration? **[5 marks]**
2. Using geological knowledge and confidence levels explain the fundamental differences between the following resources:
  - a. Inferred
  - b. Indicated
  - c. Measured**[9 marks]**
3. Explain the following terms as applied in open pit mining:
  - a. Switch Back Haul road system
  - b. Spiral haul road system**[8 marks]**
4. Define mine development and mention three main factors which influence decisions at this stage. **[10 marks]**
5. Explain the following terms as they apply in underground mining systems: adit, drawpoint, chute, crosscut, hanging wall, angle of dip, ramp, raise and crosscut. **[18 marks]**
6. Give five (4) economic considerations for the selection of a mining method. **[5 marks]**
7. State three (3) environmental problems caused by illegal mining in Ghana **[6 marks]**
8. Explain the following terms with the aid of an annotated diagram as they apply to an open pit mine:
  - a. Bench
  - b. Bench Height
  - c. Bank angle
  - d. Berm
  - e. Overall pit slope angle
  - f. Bench toe**[18 marks]**
9. Describe, using the suitable annotated sketches, the difference between a hanging wall and a footwall. **[6 marks]**

10. Briefly explain how ore extraction is done in any surface mine you know in Ghana. (Not more than 150 words) **[10 marks]**
11. List five industrial minerals **[5 marks]**

*Examiner: G. Agyei*