

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA  
SCHOOL OF PHYSICAL SCIENCES  
DEPARTMENT OF GEOLOGY

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BTech (GEOLOGY), 2015/2016 SESSION

COURSE: GEL 516 (MINING GEOLOGY)

UNIT: 2

DATE: 4<sup>th</sup> April, 2016.

TIME ALLOWED: 2 Hours

**Instructions:** This paper has two sections. Answer two questions from each section.

**SECTION A**

1. Describe mining techniques under the following:
  - (a) Surface mining.
  - (b) Underground mining.
2.
  - i. What are the factors usually taken into consideration in the selection of mining methods?
  - ii. Give the advantages and disadvantages of open cast mining as against underground mining.
3. Write brief notes on the following:
  - (a) Environmental effects of mining.
  - (b) Mining and quarrying instruments .
  - (c) Delineation of prospective ore bodies.

**SECTION B**

1.
  - (a) Enumerate and discuss the key components of mining.
  - (b) Clearly distinguish between prospection and exploration for minerals.
2. Write short and concise notes on the following:
  - (a) Ore.
  - (b) Tenor.
  - (c) Hanging wall.
  - (d) Foot wall.
  - (e) Ore grade.
  - (f) Head grade.
  - (g) Gangue.
  - (h) Mineral cartel.
  - (i) Industrial minerals.
3. Describe the systematic steps involved in the mining and development of either gold or water.