

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

**SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BTech GEOLOGY,**  
**2017/2018 SESSION**

**COURSE CODE: GEL 523**

**UNIT: 2**

**COURSE TITLE: ENVIRONMENTAL GEOLOGY**

**INSTRUCTIONS: ANSWER TWO QUESTIONS FROM EACH SECTION**

**TIME ALLOWED: 2 HOURS**

**DATE: 17/09/ 2018**

**SECTION A**

1. (a) What is the Environment?  
(b) Explain the various ways man has impacted negatively on his environment and the ways in which these impacts can be mitigated or reduced.
2. Write brief notes on the following;
  - a. Hazards related to volcanism
  - b. Erosion and its related hazards
  - c. Preventive and adjustment measures in flooding
3. Explain the causes, effect and preventive measures for the following forms of mass movement;
  - a. Landslide
  - b. Mudflow
  - c. Avalanche

**SECTION B**

4. (a) Explain how climate influences the environmental impact of mineral development.  
(b) Enumerate four ways of reducing the impact of mineral development.
5. (a) Outline and briefly explain physical and chemical treatment techniques used in the remediation of contaminated land.  
(b) Briefly outline the factors to be considered in the reclamation of derelict land.
6. (a) Describe the procedures for estimating the area and volume of a municipal liquid waste disposal system.  
(b) What is the recommended safe attenuation distance between septic tanks and drinking water sources?  
(c) What parameter in groundwater will indicate contamination from domestic liquid waste disposal system?