

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: GEL526

UNIT: 2

COURSE TITLE: DRILLING TECHNOLOGY

INSTRUCTIONS: ANSWER ANY THREE QUESTIONS

TIME ALLOWED: 2 HOURS

DATE: 18TH SEPT., 2018

1.
 - a. Sketch and label a drilling rig.
 - b. Briefly explain the function of the major components of a drilling rig.
 - c. Briefly explain the role of the various personnel involved in carrying out a drilling project.

2. Write explanatory notes on the following:
 - a. Stages in oil and gas exploration.
 - b. Drill bits and the various geological formations they are designed for.
 - c. Drilling for geothermal energy.

3.
 - a. Discuss the best drilling method you would employ in coarse glacial till, boulder deposits or highly disturbed, broken geological materials.

 - b. State the merits and demerits of using the method.

4. Write concise notes on the following;
 - a. Advantages and disadvantages of the reverse circulatory rotary drilling method.
 - b. Importance of filter packing and development of a water well.
 - c. Geothermal Resources.

5. Write brief notes on the following:
 - a. Personnel Protective Equipment (PPE).
 - b. Drilling related accidents.
 - c. Safety in drilling.