

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

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BTECH (GEOLOGY), 2016/2017
SESSION

COURSE: GEL224 (MINERAL RESOURCES AND ENVIRONMENTAL GEOLOGY) UNIT: 2

DATE: 25TH OCTOBER

TIME ALLOWED: 2 Hours

INSTRUCTION: Answer question 1 and one question each from each sections

- 1ai. Explain condition responsible for the degradation of hydrocarbon.
- ii. State the end product of petroleum degradation.
- bi. Define the following terms: water table, vadose zone, porosity, permeability and infiltration.
- bii. What conditions are necessary for the formation of artesian well?

SECTION A

- 2a. Discuss the factors that favour the formation of hydrothermal deposit.
- bi. What is the role of chemical weathering in the formation of ore by surface processes?
- bii. List three ore of copper with their chemical composition.
- 3ai. List four factors that determine the profitability of a mineral deposit.
- aii. Explain any two factors listed the above.
- b. Explain the source of sediments, organic matter, temperature and pressure in the formation of petroleum.

SECTION B

- 4a. Discuss groundwater pollutants.
- b. Mention five ways through which groundwater can be controlled.
- c. Briefly discuss any five measured air pollutant.
- 5ai. Mention any five geological hazards.
- aii. Explain any three of the geological hazards mentioned in (5ai) above.
- b. Mention any five effects of geological hazards.
- c.. Mention five control measures for geological hazards.