



**ELIZADE UNIVERSITY, ILARA-MOKIN, ONDO STATE, NIGERIA**

**BASIC & APPLIED SCIENCES  
BIOLOGICAL SCIENCES  
FIRST SEMESTER EXAMINATION  
2020/2021 ACADEMIC SESSION**

**COURSE CODE: MCB 403**

**COURSE TITLE: Petroleum Microbiology**

**COURSE UNIT(S): 2 UNITS**

**DURATION: 2 hours**

**HOD'S SIGNATURE**

**NAME:..... MAT.No:.....**

**INSTRUCTIONS: Answer any 3 questions**

1. Discuss in details Microbial degradation of petroleum and petroleum products under aerobic and anaerobic condition.
  - b. Describe concisely the role of microorganisms in petroleum industry using two organisms you know
2. Describe how you will use microorganism for the recovery of uranium and copper
  - b. List and explain the ecological factors affecting the efficiency of bioleaching
  - c. Briefly discuss the role of the following on petroleum bio-refining
    - Genetic Engineering
    - Protein Engineering
    - Biocatalysis
    - Extremophilic micro-organisms
3. Discuss environmental and social issues associated with petroleum exploration and mention 10 by-products of petroleum
4. Explain in details desulfurization
  - b. Discuss in details factor(s) affecting oil recovery
5. Discuss oil tailing pond
  - b. Explain bio-densification of mature fine tailings
  - c. List and explain the 6 microbial effects on tailing properties