



ELIZADE UNIVERSITY,
ILARA-MOKIN, NIGERIA

FACULTY: BASIC & APPLIED SCIENCES

DEPARTMENT: BIOLOGICAL SCIENCES

FIRST SEMESTER EXAMINATION

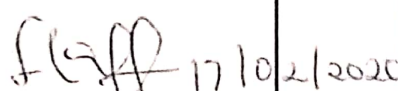
2019/2020 ACADEMIC SESSION

COURSE CODE: MCB 403

COURSE TITLE: PETROLEUM MICROBIOLOGY AND BIOMINING

COURSE UNIT(S): 2 UNITS

DURATION: 2 HOURS


17/10/2020

HOD's SIGNATURE

NAME:.....

MAT. No:.....

INSTRUCTIONS: Attempt three (3) questions in all

Answer any two (2) questions in section A, and any other one (1) in Section B

SECTION A

Answer any two questions from this section

1. (a) Describe the cathodic depolarization theory of microbial induced corrosion.
(b) What corrosion prevention methods are applicable in oil production and distribution systems.

2. Write short notes on the following:
 - (a) Microbiology of acid mine drainage
 - (b) Reservoir souring and its control
 - (c) Ribulose monophosphate pathway of methane assimilation
 - (d) Principles of Microbial Enhanced Oil Recovery (MEOR)

3. (a) Discuss the principles involved in the use of microbes as indicators of Petroleum-bearing formations
(b) Briefly describe any five techniques used in microbial prospecting for Petroleum.

SECTION B

Answer one (1) question in this section

4. (a) Write in details on either of environmental issues or social impact of activities associated with the petroleum refinery.
(b) Discuss the mechanisms of hydrocarbon degradation
(c) List ten major products of oil refinery

5. (a) Explain the bio-densification of mature fine tailings (MFT)
(b) Discuss four factors affecting crude oil degradation.
(c) List the 6 microbial effects on MFT properties.