



FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
DEPARTMENT OF MICROBIOLOGY
SECOND SEMESTER EXAMINATION, 2019/2020 SESSION
MCB 522 (PETROLEUM MICROBIOLOGY) (2 CREDIT UNITS)

INSTRUCTION: Answer any **three** questions **TIME: 2hours**

- 1(a). Define microbiologically-influenced corrosion (MIC)
- 1(b). The presence of microorganisms is a prerequisite for microbiologically-influenced corrosion. Discuss.

2. Write short notes on the following:
 - i. Rhizofiltration
 - ii. Phytostabilization
 - iii. Phytoextraction

- 3(a). Microorganisms helps in degradation of petroleum in soil environment. Discuss the important conditions that can aid or inhibit this important microbial activity.
- 3(b). What are the evidences that support the origin of petroleum from organic matters?

- 4(a). What are biosurfactants? In a tabular form, highlight three (3) groups of biosurfactants, the organisms that produce them and their applications.
- 4(b). Write short notes on the nitrogen compounds in petroleum using relevant structural formulae.

- 5(a). Discuss the involvement of microorganisms in oil spill in the Niger Delta, Nigeria
- 5(b). Enumerate the measures an oil company should take to control oil spill in an aquatic environment