

OBAFEMI AWOLOWO UNIVERSITY, LLE-IFE, NIGERIA
FACULTY OF SCIENCE
DEPARTMENT OF MICROBIOLOGY



B.Sc. (Microbiology) Degree Examination

Semester: Rain 2010/2011 Session

Date: 2nd December, 2011

Course Code: MCB 410

Time Allowed: 2 ½ Hours

Course Title: Petroleum Microbiology

Instructions: Answer **ALL** Questions. Use separate booklet for different sections

Important Notice

ACADEMIC INTEGRITY: Requires you to uphold a high standard of honesty in this examination and eschew cheating in whatever form. Some examples of violations of this requirement are: *using notes, handouts or hooks; looking at another person's answer booklet; knowingly allowing another student to look at your answer booklet; and, verbally exchanging information with another student* etc. You are strongly advised to simply put in your best and leave the rest!

SECTION A

1. Describe the carbon cycle and use it to explain (a) formation of crude oil in the Niger Delta of Nigeria
(b) Climate change phenomenon.
2. Discuss the chemical, structural, biological and environmental factors that influence oil degradation in terrestrial and aquatic milieu.



SECTION B

- 1 (a). Discuss in details the role of microorganisms in oil recovery processes.
(b). What are the key differences between petroleum degradation in aquatic and soil ecosystems after an oil spill?
- 2 (a). Write briefly on the role of cometabolism in bioremediation programme.
(b). Why is seeding of microorganisms not effective in bioremediation in a terrestrial ecosystem?



Obafemi 25/11/11