



**FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF LIFE SCIENCES
DEPARTMENT OF MICROBIOLOGY**

SECOND SEMESTER EXAMINATION 2015/2016 SESSION

COURSE CODE: MCB 523

COURSE TITLE: ENVIRONMENTAL MICROBIOLOGY II (3 UNITS)

CLASS: 500 LEVEL

TIME: 2 HOURS

Instruction: Answer four questions, at least one question from each section

SECTION A

- 1(a). A case of prolonged inhalation and ingestion of pesticides was reported to the school clinic from a student. The student has enumerated some pesticides that he was exposed to. Observable signs and symptoms were detected by the doctor. As an environmental microbiologist, kindly assist the doctor with the names of ten (10) insecticides, herbicides, and fungicides active ingredients each and furnish him with all their brand names.
- 1(b). What are natural pesticides? Briefly illustrate. Itemize the four principal ingredients of natural pesticides.
- 2(a) Mr. Victor was suddenly baffled due to the hypoxic nature of the photic and pelagic zones of the aquatic environment. What could be the likely cause of this condition and its consequence?
- 2(b). A 5-year-old boy was seen playing in an aquatic environment at a particular location. Few minutes later he was found by Mr Felix some distance away from the previous location. Suggest a suitable name for this aquatic environment and provide a reason for your answer. Mention the likely species found there.

SECTION B

3. Describe the different techniques you would employ in the treatment of effluent collected from industry producing battery. Highlight the reasons for treatment of such water
4. "Microorganism rarely survives in the air" Discuss

SECTION C

5. Describe the Nitrogen and Sulphur cycles. Briefly enumerate the effects of excess of the two gases in the environment
6. Discuss the different microbial association and the beneficial impact they played in the environment