FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
DEPARTMENT OF MICROBIOLOGY
FIRST SEMESTER EXAMINATIONS, 2017/2018 SESSION
COURSE TITLE: MICROBIAL ECOLOGY
COURSE CODE: MCB 313 (3 UNITS)

INSTRUCTION: ANSWER FOUR QUESTIONS ONLY TIME: 2 HOURS

1(a). Microbial interactions are crucial for a successful establishment and maintenance of a microbial population, Discuss with relevant examples

1(b). Explain the association in which aerobic microorganisms help obligate anaerobes to grow by consuming oxygen in the environment.

2(a). Mention two ways each by which *Polaromonas vacuolata* and *Helicobacter pylori* adapt to their environment.

2(b). With relevant example, differentiate between the following pairs:

i. Rhizosphere and phyllosphere

ii. Autochthnous and allochthonous microorganisms

iii. Mesophiles and halophiles

3(a). The human body is habitat for microorganisms, discuss with relevant examples.

3(b). Give five reasons why the normal microbiota may be harmful to their host.

4. Discuss the role of microorganisms in the cycling of carbon in the environment.

5(a). Define bioaugmentation

5(b). Discuss the relative rates by which microorganisms can degrade organic pollutants in soil in Ogoni land (Nigeria) and Groningen (The Netherlands).

6. Denitrification process is enhanced by root exudates and dead root tissues in the soil. Discuss