



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS**  
**MARCH/APRIL 2016 EXAMINATION**

**SCHOOL OF SCIENCE AND TECHNOLOGY**

**COURSE CODE:** BIO320  
**COURSE TITLE:** MICROBIAL ECOLOGY

**TIME ALLOWED:** 2 HOURS

**INSTRUCTION: ANSWER QUESTION 1 AND ANY OTHER THREE QUESTIONS**

1. (a). Briefly describe the three stages of dispersal of air-borne particles.  
**9 marks**  
(b). Aquatic environments are often grouped into oceans and inland waters. Briefly discuss.  
**12 marks**  
(c). List any two groups of phytoplanktons and an example in each case.  
**4 marks**
2. (a). Define salt wedge and explain its influence on marine organisms? **3 marks**  
(b). Discuss briefly, factors that affect the concentration of microorganisms in the atmosphere.  
**12 marks**
3. (a). What are the advantages and disadvantages of soil plate method of isolation of soil microorganisms? **12 marks**  
(b). Give three limitations of the Rossi-Cholodny slide method of isolation of soil microorganisms  
**3 marks**
4. (a). Discuss the practical application of aeromicrobiology **7 marks**  
(b). List any five factors of aquatic environment **5 marks**  
(c). Explain briefly what microbial ecology is concerned about **3 marks**
5. Briefly discuss how biodeterioration differ from biodegradation? **15 marks**
6. (a). Describe some morphological adaptations of micro-organisms in the water environment  
**10 marks**

(b). List the major factors affecting microbial growth in soil

**5 marks**