NATIONAL OPEN UNIVERSITY OF NIGERIA
Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi-Abuja.

FACULTY OF SCIENCE
JANUARY 2018 EXAMINATION

PROGRAMME
COURSE CODE: BIO 416
COURSE TITLE: INDUSTRIAL MICROBIOLOGY
CREDIT UNIT: 3
TIME ALLOWED: 2HOURS
TOTAL MARKS: 70%

INSTRUCTION: ANSWER FOUR QUESTIONS IN ALL BUT QUESTIONONEIS COMPULSORY

Q1a. Define the term Industrial Microbiology. **2marks**
b. List three characteristics of micro-organisms that are suitable to an industrial microbiologist. **3marks**
c. List four types of media used in microbiology**4marks**
d. List three methods used in isolating pure cultures of micro-organisms. **3marks**
e. list five basic requirements of all microbes used for media formulation.**5marks**
f. state five criteria for media formulation. **5marks**

22MARKS

Q2a. Explain the term Mutation.**2marks**
b. Briefly list the methods of strain selection in industrial microbiology.**3marks**
c. Explain method of strain improvements. **7marks**

12MARKS

Q3a. Define the term Recombinant DNA Technology**2marks**
b. list the technologies behind the production of a genetically engineered bacterium.**7marks** **12MARKS**
c. Explain how hybridization takes place in some lower fungi?**3marks**

Q4a. What is Marshing ?**3marks**
b. Explain briefly the three widely contrasting Marshing processes.**7marks**
c. state the role of probiotics in the diet of man.**2marks**

12MARKS

Q5a. What are Antifoams? **2marks**
b. List four properties of Antifoams?**8marks**
c. list two factors that must be considered when constructing a fermenter. **2marks**

12MARKS

Q6a. State the role of malting in Alcoholic Beverages production. **5marks**
b. List the three processes involved in malting.**3marks.**
c. briefly explain the process of beer production.**4marks**

12MARKS