



NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
SEPTEMBER/OCTOBER 2015 EXAMINATION

SCHOOL OF SCIENCE AND TECHNOLOGY

COURSE CODE: CHM 312

COURSE TITLE: Industrial Chemical Processes I

COURSE UNIT: 2 units

TIME: 2 hours

INSTRUCTION: Answer question 1 (COMPULSORY) and any other three questions.

- (1) (a) What is fermentation? (2 marks)
(b) Explain the two major classes of industrial fermentation. (10 marks)
(c) List three scientists that made contribution to the concept of fermentation. (3 marks)
(d) List five unit operations involved in a fermentation product recovery and purification. (5marks)
(e) Write short notes on the production process of dyes. (5 marks)
- (2) (a) List ten pesticides and indicate the pest controlled by each of them. (5 marks)
(b) Discuss the two major types of flavoring agents. (10 marks)
- (3) (a) State five characteristics of explosives. (5 marks)
(b) Describe the Nitrocellulose and TNT production processes of explosives. (10 marks)
- (4) Discuss the three activities involved in the production of pesticides. (15 marks)
- (5) Write short notes on the following:
(a) High density polyethylene (HDPE) (5 marks)
(b) Low density polyethylene (LDPE) (5 marks)
(c) Linear low density polyethylene (LLDPE) (5 marks)
- (6) (a) Define enology. (1 mark)
(b) Discuss the manufacturing process of beer. (10 marks)
(c) List four distinct steps in the wine making process. (4 marks)