



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

SCHOOL OF SCIENCE AND TECHNOLOGY

COURSE CODE: CHM 312
COURSE TITLE: Industrial Chemical Processes I

TIME: 2 hours

COURSE UNIT: 2 units

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

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