



NATIONAL OPEN UNIVERSITY OF NIGERIA
University Village, Nnamdi Azikiwe Expressway, Plot 91, Cadastral Zone, Jabi, Abuja

FACULTY OF SCIENCE

JANUARY/FEBRUARY 2018 EXAMINATION

COURSE CODE: CHM 312

COURSE TITLE: Industrial Chemical Processes I

COURSE UNIT: 2 units

TIME: 2 hours

INSTRUCTION: Answer Question 1 and any other three (3) questions

Question 1

- a) List four classes of synthetic adhesives. (4 marks)
- (b) State ten uses of adhesives. (10 marks)
- (c) Define the term “explosives” and state two broad categories of commercial explosives (4 marks)
- (d) State the functions of chromophore and auxochrome in dyeing process. (2 marks)
- (e) Outline the three separate steps/activities involved in the production process of pesticides. (3 marks)
- (f) Explain what is meant by thermoset polymer. (2 marks)

Question 2

What are adhesives and how are they manufactured? (15marks)

Question 3

- a) Describe nitrocellulose and TNT production processes. (9 marks)
- b) List the applications of explosives. (6marks)

Question 4

- a) Describe the production of benzaldehyde as a flavoring agent. (7 marks)
- b) What are antibiotics? Give five examples. (4 marks)
- c) Briefly describe the production process of Ibuprofen. (4 marks)

Question 5

- a) Explain in very clear terms the production process of dyes. (7 ½ marks)
- b) Write the chemical structure of Styrene butadiene rubber (SBR) (2 ½ marks)
- c) State any five Applications of Styrene Butadiene Rubber. (5 marks)