



National Open University Of Nigeria
Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja
Faculty of Science

October/November 2016 Examination

COURSE CODE: CHM 417

COURSE TITLE: INDUSTRIAL CHEMICAL PROCESSES II

CREDIT UNIT: 2

DURATION: 2 HRS

INSTRUCTION: *Answer any 4 questions*

1. (a) On what basis are inorganic fertilizers classified? 7 ½ mks
(b) Write on the preparation of Monoammonium phosphate. 10mks
2. (a) Describe the Stengel process. 11 ½ mks
(b) List the requisites for the use of a compound as a fertilizer. 6mks
3. (a) Suppose a farmer is in dire need of Diammonium phosphate fertilizer, how will you prepare the fertilizer for him in your laboratory? 11mks
(b) In what ways are phosphorus fertilizers classified? Give examples. 6 ½ mks
4. (a) When is the Serpeck's process necessary for the purification of Bauxite? 2mks
(b) Discuss the Hoope's process for the purification of Aluminium. 15 ½ mks
5. (a) Describe briefly the three main physical methods for refining metals. 3mks
(b) Explain the methods listed in 5(a) above and give appropriate examples. 14 ½ mks
- 6 (a) What is Calcination? 9 ½ mks
(b) With the aid of relevant chemical equations, show examples of ores in which the above is employed. 8mks