

TECHNICAL UNIVERSITY OF



MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES
DEPARTMENT OF PURE AND APPLIED SCIENCES
UNIVERSITY EXAMINATION FOR:
BACHELOR OF TECHNOLOGY IN APPLIED CHEMISTRY (INDUSTRIAL OPTION)
BTAC 15S SEPT 2015
BTAC 14S SEPT 2014

INDUSTRIAL PROCESSES ACH 4305
END OF SEMESTER EXAMINATION
SERIES: DEC 2016
TIME: 2 HOURS
DATE:

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of FIVE questions. Attempt Question one compulsory and any other two question

Do not write on the question paper.

Paper two

QUESTION ONE

- A. State Advantages and disadvantages of diaphragm cells used in manufacturing of sodium chloride **6 marks**
- B. With the help of a flow sheet describe manufacturing of urea **6 marks**
- C. Outline Common defects and possible causes of paint during drying **5marks**
- D. State different Factors which influence human toxicity **4 marks**
- E. Outline different properties of an ideal paint **4 marks**
- F. Outline different Factors to be consider when creating pesticide formulation **5 marks**

QUESTION TWO

- A. Define Chemical explosive and state its properties **4 marks**
- B. Give and explain briefly the role of principal chemical components in Portland cement **6 marks**
- C. Outline different Role of pigment and Binders in Paints **6 marks**
- D. Give a sketch of cement manufacturing process flow sheet **4 marks**

QUESTION THREE

- A. Outline Common defects and possible causes of paint during application **4 marks**
- B. Define fertilizer and Outline different uses of macro fertilizers **5 marks**
- C. Discuss Fiber Separation by kraft chemi-cal pulping **6 marks**

- D. Define different uses of Paint additives **5 marks**

QUESTION FOUR

- A. define pesticide adjuvant **2mks**
- B. state advantages of portland cement **4 mks**
- C. Describe briefly the following types of pesticide formulation
 - i. Emulsifiable concentrates
 - ii. Dispersible granules
 - iii. Pellets
 - iv. Fumigants **8 marks**
- D. Outline different application of fine ceramics **6 marks**

QUESTION FIVE

- A. Describe manufacturing process of ceramics **10 marks**
- B. Describe the reactions that take place in a cement kiln at various temperatures **5mks**
- C. Define Fluorspar and sketch its manufacturing flow process **5 marks**