



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY**

(MMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

2021/2022 ACADEMIC YEAR

**THIRD YEAR FIRST SEMESTER SPECIAL/SUPPLEMENTARY
EXAMINATIONS**

FOR THE DEGREE

OF

BACHELOR OF SCIENCE (INDUSTRIAL CHEMISTRY)

COURSE CODE: SCI 362

COURSE TITLE: FORMULATION CHEMISTRY

DATE: 26/07/2022

TIME: 11:00 AM - 1:00 P.M.

INSTRUCTIONS TO CANDIDATES

Answer all the Questions

TIME: 2 Hours

Question One (20 Marks)

- a) State the formulation policy? (2 Marks)
- b) List four advantages of the policy stated in a). above (4 Marks)
- c) Pesticides have an active ingredient. Define the active ingredient (2 Marks)
- d) Explain the emulsion formulation of pesticides (4 Marks)
- e) Differentiate between thermoplastics and thermosets (4 Marks)
- f) Explain the curing of adhesives and the conditions necessary for it to occur? (4 Marks)

Question Two (15 Marks)

- a) Describe the sales wave research (5 Marks)
- b) Discuss the importance of packaging (6 Marks)
- c) Differentiate between hard and soft capsules (4 Marks)

Question Three (20 Marks)

- a) List three differences between commodity and specialty chemicals (6 Marks)
- b) Explain three categories of topical pharmaceutical formulations (6 Marks)
- c) Pesticides can be prepared as emulsifiable concentrates. List three disadvantages of such a formulation (3 Marks)
- d) Active ingredients play an important role in pesticides. Give three types of active ingredients (3 Marks)
- e) What is meant by synergistic formulations (2 Marks)

QUESTION FOUR (15 MARKS)

- a) What is meant by the term 'Good Manufacturing Practice (GMP)' (2 Marks)
- b) List three reasons why Good Manufacturing Practice (GMP) is important (3 Marks)
- c) What are the two groups that are found in soap? List the three types of soap (5 Marks)
- d) What are soap-less soaps (3 Marks)
- e) Name the two types of surfactants (2 Marks)