



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 12S SEPT 2012

ACH 4405

Industrial Pharmaceutics

END OF SEMESTER EXAMINATION

SERIES:MAY 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 one

QUESTION ONE

A. Outline :-

- i. how Brownian motion prevent sedimentation
- ii. causes of creaming in pharmaceutical Emulsion

4 marks

4 marks

B. Define the following terms(i) Elixirs (ii) Collodions

4 marks

C. State

- i. Advantages and Disadvantages of soft capsules
- ii. importance of dosageforms

5 marks

4 marks

D. Explain briefly Sterilization by filtration

3 marks

E. Define mechanism of four types of Parenteral sustained release systems

6 marks

QUESTION TWO

- A. Define the following terms(i) Intraosseous infusion (ii)Aerosols **4 marks**
- B.** Define different mechanism of structured vehicles in suspension **4 marks**
- C. Discuss different Factors to be consider when choosing oral route **4 marks**
- D. Outline different
 - i. Mode of Action of preservatives as used in pharmaceuticals **4 marks**
 - ii. Characteristic of Parenteral dosage form **4 marks**

QUESTION THREE

- A. Define Otic Solutions **2 marks**
- B. Explain briefly how you will determine the following quality control test
 - i. Type of Emulsion
 - ii. rate of tablet dissolution **10 marks**
- B. Outline four methods of assessing Mixing Effectiveness **4 marks**
- C. Discuss the applications hydrophilic-lipophilic balance in formulation of emulsion **4 marks**

QUESTION FOUR

- A. Differentiate between Dispersible and effervescent tablets **4 marks**
- B. define mechanism of Ionizing and Non Ionizing Radiation as a method of Sterilization **4Mrks**
- C. Discuss breifly :-
 - i. different theories of disintegration **4marks**
 - ii. The Diffusion layer model of Dissolution **4marks**
 - iii. mechanism of biodegradable sustain release systems **4 marks**

QUESTION FIVE

- A. Differentiate between mechanism of Moist heat and dry heat **4 marks**
- B. Define (i)Ophthalmic drops (ii) Suppositories (iii) Topical semi-solid dosage **5 marks**
- C. Outline different Factors affecting intergranule bond strength (Hardness) **5marks**
- D. Define the uses of the following pharmaceutical ingredients
 - i. Flavouring agens
 - ii.** Isotonicity modifiers
 - iii.** Emulsifying agents **6 marks**