



# MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

P.O. Box 972-60200 – Meru-Kenya

Tel: +254(0) 799 529 958, +254(0) 799 529 959, + 254 (0) 712 524 293,

Website: [info@must.ac.ke](mailto:info@must.ac.ke) Email: [info@must.ac.ke](mailto:info@must.ac.ke)

---

## University Examinations 2022/2023

THIRD YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR  
OF SCIENCE IN BIOTECHNOLOGY

### SHD 3351: PHARMACOLOGY

DATE: APRIL 2023

TIME: 2 HOURS

---

INSTRUCTIONS: Answer question *one* and any other *two* questions

---

#### QUESTION ONE (30 MARKS)

- a) Explain the physiological factors that influence drug absorption and bioavailability (4 marks)
- b) With one example for each, state two major classes of antipsychotic drugs (4 marks)
- c) Outline four first line ant-TB drugs (4 marks)
- d) Describe signs and symptoms of uncomplicated malaria with examples of drugs that treat malaria (4 marks)
- e) List down four ways through which antimicrobial drugs exert their mechanism of action (4 marks)
- f) Describe two antifungal drugs
- g) List down four anti-inflammatory drugs (4 marks)
- h) State two types of enzymes that are responsible for metabolism of drugs (2 marks)
- i) Describe principles that best describe pharmacokinetics (4 marks)

**QUESTION TWO (20 MARKS)**

- a) Discuss routes of drug administration to human body (10 marks)
- b) Classify antiretroviral drugs giving examples in each class (10 marks)

**QUESTION THREE (20 MARKS)**

- a) Discuss mechanisms of antimicrobial drug resistance (10 marks)
- b) Classify diuretic drugs giving examples in each class (10 marks)

**QUESTION FOUR (20 MARKS)**

- a) Discuss about first and second line drugs used in treatment of TB (10 marks)
- b) Discuss types of adverse drug reactions (10 marks)