



W1-2-60-1-6

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**  
**UNIVERSITY EXAMINATIONS 2022/2023**  
**EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE MEDICAL**  
**MICROBIOLOGY**

**TMM 3100: PATHOGENIC MICROBIOLOGY I**

**DATE: AUGUST, 2023**

**TIME: 3 HOURS**

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**INSTRUCTIONS: Answer Any FOUR Questions (25 Marks each)**

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1. List one contribution for each of the following men to microbiology. **(25 marks)**

**2.5 marks for each**

a) Louis Pasteur

b) Robert Koch

c) Sir Alexander Fleming

d) Illya Metchnikoff

e) Gerhardt Domagk

f) Antoni Van Leeuwenhoek

g) Ferdinand Cohn

h) Frederick Twort

i) Elie Metchnikoff

j) Howard Temin

2. Describe the six pathotypes of *E. coli*, and the virulence factors that play major role in human diseases. **(25 marks)**

3. Explain in detail why antimicrobial susceptibility tests should be performed on all staphylococci from infections. **(25 marks)**

4. Describe the major differences between prokaryotic and eukaryotic cells. **(25 marks)**

5. Differentiate between trophozoites and cysts of the major intestinal protozoal parasites. **(25 marks)**

6. Describe the method of collecting blood for culture. **(25 marks)**