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University Examinations 2012/2013

FIRST YEAR, SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR
OF SCIENCE IN PUBLIC HEALTH

AFS 2201: INTRODUCTION TO MICROBIOLOGY

DATE: APRIL 2013

TIME: 2 HOURS

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

QUESTION ONE (30 MARKS)

- a) Define microbiology (2 Marks)
- b) Robert Koch Postulated 4 basic logical proofs that disease is caused by a microbe. Briefly outline the Koch's postulates. (4 Marks)
- c) Distinguish between medical microbiology and environmental micro-biology. (4 Marks)
- d) Give two differences between gram positives and gram negative bacteria. (4 Marks)
- e) State four types of organisms which are mainly studied in microbiology. (4 Marks)
- f) Using sketches, give the difference between Cocci's and Bacilli/rods. (4 Marks)
- g) Briefly outline the importance of normal flora in host microbe relationships. (4 Marks)
- h) i) What is meant by innate immunity? (2 Marks)
ii) Give two examples of a natural barrier to disease causing organisms. (2 Marks)

QUESTION TWO (20 MARKS)

- a) Using a diagram, discuss;
 - i. The Prokaryotic cells. (5 Marks)
 - ii. The Eukaryotic cells. (5 Marks)
- b) Outline the gram staining procedure starting with preparation of a grams smear. (10 Marks)

QUESTION THREE (20 MARKS)

- a) State and discuss three types of symbiotic microbe-host relationships. (12 Marks)
- b) Microbes are usually categorized into 3. Briefly outline different locations of normal flora in humans. (8 Marks)

QUESTION FOUR (20 MARKS)

- a) Write short notes on fungi. (10 Marks)
- b) Briefly outline four main stages of microbial infection in human host. (10 Marks)