



**Technical University of Mombasa**  
**Faculty of Applied and Health Sciences**

**DEPARTMENT OF MEDICAL SCIENCES**  
**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF MEDICAL**  
**LABORATORY SCIENCES**

**AML 4300: MEDICAL BACTERIOLOGY II**

**SPECIAL/SUPPLEMENTARY EXAMINATION**

FEBRUARY 2013 SERIES

2 HOURS

Instructions to candidates:

This paper consist of **TWO** sections **A** and **B**

**Section A** –Contains MCQS, any wrong response will be penalised. Answer **ALL** questions in **Section B**.

**SECTION A – MCQs – (30marks)**

1. Endotoxins are?
  - a) Produced by gram negative bacteria
  - b) Produced by gram positive bacteria
  - c) Also known as lipopolysaccherides
  - d) Specific in action
  
2. Lypohlisation is?
  - a) Deep freeing
  - b) Free drying
  - c) Heat drying
  - d) Smoking

3. The following is true of prokaryotes except?
  - a) The lack mitochondria
  - b) They use fimbriae as organs of attachment
  - c) They move by pseudopodia
  - d) They have membrane bound organelles
  
4. Symptoms of staphyococced food poisoning include?
  - a) Nausea, Diarrhea, vision impairment and dizziness
  - b) Nausea, Vomiting, diarrhea, stomach discomfort
  - c) Partial paralysis, intestinal irritation, diarrhea and vomiting
  - d) Headache, CNS involvement, and jaw lock.
  
5. The most desired media for isolation of neisseria species is
  - a) Modified Thayer-Martin medium
  - b) Blood agar
  - c) MacConkey agar
  - d) Collette blood agar containing soluble starch
  
6. Bacillary dysentery is caused by
  - a) E.Coli
  - b) Shigella species
  - c) Yersinia species
  - d) None of these
  
7. The following tests differentiate enteropathogens from proteus
  - a) Gram stain
  - b) Indole test
  - c) Urease Test
  - d) Mobility test

8. Pfeiffer's bacillus is also known as:-
- a) Bacillus anthracis
  - b) Haemophilus influenza
  - c) Bordetella pertussis
  - d) Vibrio cholera
9. Which of these bacteria can grow in acidic environment?
- a) Proteus
  - b) Neisseria
  - c) Lactobacilli
  - d) Helicobacter
10. Which of the following is true about Nucleic acids?
- a) Are composed of nucleotides
  - b) Each nucleic acid molecule has its own order or "sequence" of nucleotides
  - c) The nucleic acids do not appear in sequence
  - d) Nucleic acids are not composed of nucleotides
11. What role does a gene play in bacterial genetics?
- a) To encode the nucleotide sequences of mRNA
  - b) To moderate the nucleotide sequence in the DNA
  - c) To regulate the rate of mitosis and meiosis
  - d) To regulate the expression of other genes
12. Bacterial classification is based on the following except?
- a) On the basis of the founder
  - b) On the basis of geographical location and site of isolation
  - c) Genetic relatedness
  - d) Biochemical test and staining reactions

13. Virulence factors include all of the following except?
- a) Possession of capsule
  - b) Ability to produce toxins
  - c) Ability to presence of plasmids
  - d) Presence of spores
14. Which of the following scientist was able to prove that bacteria caused disease
- a) Robert Koch
  - b) Edward jinnee
  - c) Antony van Leewoenhieic
  - d) Robert Hooke
15. To determine whether the attach on sugar by an organism is by oxidation or fermentation the method used is?
- a) Oxidation Test
  - b) Hugh and Leifson Test
  - c) Oxidation fermentation Test
  - d) Gordon and McLeod test
16. The following can be used as counter stains in ZN staining
- a) Crystal violet
  - b) Methylene blue
  - c) Carbol fuchsin
  - d) Malaclute green

17. The mutual inhibition of swarming by the genes proteus is indicative of?

- a) Over incubation
- b) Growth of different strains
- c) Growth of similar strain
- d) Under incubation

18. Why is decontamination of sputum important?

- a) It reduces chances of contamination during culture
- b) It reduces contamination by the upper respiratory flora
- c) It reduces the survival of the isolate
- d) It increase the survival of the normal flora

19. Which of the following sugars is fermented by Neissuna gonorrhoea?

- a) Maltose
- b) Fructose
- c) Sucrose
- d) Glucose

**SECTION B – (40marks) Answer ALL questions**

1. Mr. Majani a food Vendor, had not reported to work for three days. He complained of sleepless nights because of fever, joint pains, diarrhea, anorexia and malaria. After the doctors examination he was sent to the laboratory for stool culture. Colonies with black coating were isolated from XLD.

- i. Suggest the probable cause of this disease **(2marks)**
- ii. Explain the process of recovery from stool **(18marks)**

2. Discuss the factors contributing to the emergence of disease. **(20marks)**