



TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Applied and Health Sciences

DEPARTMENT OF MEDICAL SCIENCES

DIPLOMA IN PHARMACEUTICAL TECHNOLOGY

AML 2201: BACTERIOLOGY

SUPPLEMENTARY/SPECIAL EXAMINATIONS

SERIES: FEBRUARY 2013

TIME: 2 HOURS

INSTRUCTIONS:

- This paper consists of TWO Sections. Answer ALL questions.
- Section A: Has multiple choice questions, circle the correct answer, avoid guesswork as ½ mark will be deducted from any wrong response.
- Section B: has essay questions to be answered in provided booklet.

This paper consists of Fiveprinted pages.

SECTION A (40 MARKS) Answer All questions

1. The following tests differentiates pseudomonas from Escherichia coli
 - A. Motility
 - B. Glucose fermentation
 - C. Oxidase
 - D. Growth in Macconkey
2. Which of the bacteria are transmitted through vector bites
 - A. Yersinia
 - B. Bartonella
 - C. Salmonella
 - D. Klebsiella
3. The following must be avoided when performing the oxidase test:
 - A. Using pseudomonas as a control
 - B. Delayed reading of results
 - C. Oxidized wireloop
 - D. Testing fresh cuvettes
4. Bloody diarrhea can be caused by:
 - A. Staphylococcal food poisoning
 - B. Vibrio parahaemolyticus
 - C. Shigella dysenteriae
 - D. EIEC
5. Nisseria species are differentiated from other. Cocci by
 - A. Oxidase
 - B. Gram stain
 - C. Type of infection
 - D. Catalase test
6. Which of the following tests can be used for rapid identification of staphylococcus aureus
 - A. Coagulase
 - B. Oxidase
 - C. Indole
 - D. Catalase
7. Incomplete hemolysis of RBC with formation of green fragment is
 - A. α -haemolysis
 - B. X-haemolysis
 - C. β -haemolysis
 - D. δ -haemolysis
8. In the citrate utilization test, the media changes from green to
 - A. Red
 - B. Black
 - C. Pale
 - D. Blue
9. Hydrochloric acid is used in the Dwase test to

- A. Hydrolyse DNA molecule
 - B. Inhibit the enzyme DNASE
 - C. Precipitate unhydrolysed DNA
 - D. Kell test bacteria
10. The methylred-voges-proskauer (MR VP) tests is employed to detect the production of these compounds:
- A. Acetoin
 - B. Indole
 - C. Acidic-products
 - D. Methanol
11. Capsulated from positive cocci and capsulated from negative nods observed in a sputum specimen are most likely to be:
- A. Moraxella
 - B. Klebsiella
 - C. Streptococcus
 - D. Staphylococcus
12. Identification of shifellae to species level is carried out by
- A. Brotyping
 - B. APIZOE
 - C. Serology
 - D. Serotyping
13. Which Escherichia Coli strain causes watery diarrhoea
- A. EPEC
 - B. ETEC
 - C. EIEC
 - D. EHEC
14. Yellow colonies growing in TCBS media are
- A. Sucrose fermenting
 - B. Sucrose non fermenting
 - C. Likely to be vibrio cholera
 - D. Sensitive to bile salts
15. Which statement is not true about cerebral spinal fluid
- A. Grain stain of specimen is valuable
 - B. Specimen is refrigerated if culture is delayed
 - C. Maclonkey can be used to culture CSF
 - D. Neissenia species can be isolated from CSF
16. The compounds in X and V factors are
- A. Haemoglobin
 - B. Nicotinamide-adenine decleotide (NAD)
 - C. CAMP
 - D. Hemin

17. Sputum specimen which contains pus, mucus and is greenish is recorded as
- A. Mucopurulent
 - B. Muroid
 - C. Mucosalivary
 - D. Purulent
18. Swarming of proteus is observed in
- A. Blood agar
 - B. CLED
 - C. Mdonkey
 - D. Muccler Hinton agar
19. Toxic sluck syndrome can be caused by
- A. Pseudomonas
 - B. Staphyloccus
 - C. Streptococcus
 - D. Yersinia
20. Colonies appearing as pink black in DCA medium are most likely to the
- A. Proteus
 - B. Salmonella
 - C. Citrobacter
 - D. Shigella
21. The golden test for diagnosis of febrile fever is
- A. PCR
 - B. Blood culture
 - C. Bone marrow culture
 - D. Serology
22. Which of the following statement is true about mycobacteria
- A. MOR-Strains have not been detected
 - B. An incubation period of 24 hours is required for culture
 - C. An enriched elective media is required for isolation
 - D. Some species can cause ulcers of the skin
23. Classification of streptococcis by serogrouping is called
- A. Rosefield classification
 - B. Lancefield
 - C. TSS
 - D. Eifiklman scheme
24. Which of the following bacteria assist in the prevention of gastroetivitis or raginosis
- A. Corynbacteria
 - B. Candida
 - C. Proteus
 - D. Lactobacillus

SECTION B (40 MARKS)

1. a) i) Briefly explain the principle behind the following tests
– Catalase (2 marks)
– Urease (2 marks)

ii) Describe how the following media is prepared and inoculated
– Simmons citrate (3 marks)
– TSI (3 marks)

b) Describe how collection and inculation of a renine specimen from a male patient. (10 marks)
2. Describe how the E-test is performed. (10 marks)
 - a) Describe how E-test is performed (10 marks)
 - b) Discuss the identification of the following
– Haemophilus (5 marks)
– Vibrio cholera (5 marks)
3. Discuss the collection and microbiological processing of a sputum sample. (20 marks)