



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
BMLS12S –Mid

AML 4300 : MEDICAL BACTERIOLOGY II

SPECIAL/SUPPLEMENTARY EXAMINATION

OCTOBER 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. Virulence factors include all of the following Except?
 - a) Possession of capsule
 - b) Ability to produce extracellular enzymes
 - c) Presence of plasmid
 - d) Ability to produce toxins
 - e) Possession of Pilli
2. Citrobacter fungi from salmonella species in that they?
 - a) Are gram positive
 - b) Produce hydrogen sulphide
 - c) Hydrolyses Urea slowly
 - d) Are motile
 - e) Do not cause disease in humans

3. Which of the sugars is fermented by *Neisseria gonorrhoea*?
 - a) Maltose
 - b) Fructose
 - c) Sucrose
 - d) Glucose
 - e) Xylose

4. All enterobacteriales are?
 - a) Oxidase positive
 - b) Oxidase negative
 - c) Glucose fermenters
 - d) Ferment lactose
 - e) Motile

5. *Streptococcus pyogenes* are differentiated from haemolytic streptococci by?
 - a) Optochin sensitivity
 - b) Bacitracin sensitivity
 - c) Sensitive to penicillins
 - d) CAMP test positive
 - e) Capsulated

6. Which of the following organisms grow at pH of 8.6?
 - a) *Mycobacterium avium*
 - b) *Pseudomonas aeruginosa*
 - c) *Vibrio cholerae*
 - d) *Clostridium tetani*
 - e) *Salmonella* species

7. Which of these are rod shaped neisseria ?
 - a) *Neisseria sicca*
 - b) *Neisseria subflava*
 - c) *Neisseria elongate*
 - d) *Neisseria meningitidis*
 - e) *Neisseria gonorrhoeae*

8. Reiter's syndrome is a late complication of which organism?
 - a) *Shigella flexneri*
 - b) *Proteus vulgaris*
 - c) *Vibrio cholerae*
 - d) Verocytotoxic E.Coli
 - e) *Salmonella enteritidis*

9. *Salmonella typhi* is implicated in all these diseases except?
- Typhoid
 - Osteomyelitis
 - Haemolytic-Uremic syndrome
 - Spleen and liver abscesses
 - Pneumonia
10. Endemic typhus is transmitted to man by?
- Rat fleas
 - Mites
 - Jigger
 - Louse
 - Faecal oral route
11. Which clostridia species is most commonly recovered from cases of gas gangrene?
- Clostridia bifermenters*
 - Clostridia perfringens*
 - Clostridia Sordelli*
 - Clostridia deficile*
 - All of the above
12. Which of the following is not a true statement concerning clostridia tetani?
- Spores in soil contaminate puncture wounds
 - Disease caused by an exotoxins acting on the CNS
 - It is a facultative anaerobe
 - It is a gram negative, spore forming bacilli
 - It is non pathogenic to man
13. "Medusa head" colonial appearance is characteristic of ?
- Bacillus anthracis*
 - Bordetella pertussis*
 - Clostridia welchii*
 - Corynebacteria diphtheria*
 - Brucella abortus*
14. What is common in chlamydia, rickettsia, and viruses?
- Possess DNA and RNA
 - Possess DNA or RNA
 - They are all obligate intracellular parasites
 - Reproduce through replication
 - They reproduce through binary fission

15. Lig-bel disease is caused by:-
- Clostridium botulinum
 - Clostridium difficile
 - Clostridium tetani
 - Clostridium Perfringens tyre C.
 - Clostridium septicum
16. Bile stability test is routinely used to identify which organism?
- Strept pneumonilae
 - Strept pyogens
 - Strept agalactiae
 - Equisimilis
 - Virichance streptococci
17. Among the following bacteria which ones posses a capsule?
- Salmonella typhiminum
 - Shigilla sonnei
 - Enterobacter aerogenes
 - Proteus vulgaris
 - Listeria monocytogues
18. When vibrio are cultured in TCBS they produce colonies of which colour?
- Yellow
 - Green (colour of the media)
 - Pink
 - White
 - None of the above
19. The serotype ogawa and inaba share which in common ?
- Antigen B
 - Antiger D
 - Antigen A
 - Antigen C
 - Antigen E
20. Mcfadyeans reaction is employed for presumptive diagnosis of
- Anthrax
 - Typhoid
 - Diphtherra
 - Teknis
 - Melioidosis

21. Tularemia is a human disease caused by?
- Brucella metitensis
 - Bucetha abortus
 - Francisiella pertesis
 - Bordetella pertesis
 - Bordetella parapertusis
22. The following organism has been associated with “sexual disease of the poor”
- Neisseria gorrlone
 - Syphilis
 - HIV
 - Candidiasis
 - Chancroid
23. Setalitim is a test performed for identification of?
- Bordetella pertusis
 - Haemophiles influenza
 - Streptococcus preumoniae
 - Boucella aborts
 - None of the above
24. Person to person transmission via cough is common with the following disease except?
- Whooping cough
 - Brouchitis
 - Tularemia
 - Preumomia
 - All of the above
25. Which of these media contain both the Hemin and NAD factors?
- Sheep blood agar
 - Chocolate blood agar
 - Horse blood agar
 - Nutrient agar
 - Eosin methylene agar
26. Bordet Gengom Media is a selective media for which organism?
- Yersinia species
 - Enterobacteriaceae fermily
 - Vibrio species
 - Bodetellae species
 - Brucella species

27. Humans are accidental hosts of which of the following organism ?
- a) Francisilla tuturensis
 - b) Brulella abortes
 - c) Vibrio cholera
 - d) Mycobacterium tuberculosis
 - e) Neisseria gonorrhocae
28. Gas gangrene is characterized by all these except?
- a) Sepsis
 - b) Edema
 - c) Muscle necrosis
 - d) Paralysis
 - e) Sweet fermentative smelling discharge
29. Specific paralysis is characteristics for which disease
- a) Anthrax
 - b) Tetanus
 - c) Leprosy
 - d) Food poisoning
 - e) Dysentery
30. Which of the following mycobacterium are grouped as photochromogen?
- a) M.tuberculosis
 - b) M.boris
 - c) M.Szulgai
 - d) M. Kansasii
 - e) All of the above

SECTION B

1. A patient was to hospital very weak and presenting with severe dehydration. The patient complained of severe diarrhea and vomiting for the last 3 hours and could barely walk. A stool sample that had a “vice water” appearance was brought to the laboratory of examination. Discuss the process involved in the recovery and identification of the suspect organism.
(20marks)

2. (a) Briefly explain the classification used to differentiate the Gems streptococcus (10marks)
(b) Briefly explain the catalane test and causes of fats positive. (10marks)