

UNIVERSITY OF ZAMBIA
SCHOOL OF MEDICINE
PTM 4020 CONTINUOUS ASSESSMENT 1

TUESDAY 17th DECEMBER, 2013

08.00HRS – 09.45HRS
INSTRUCTIONS

COMPUTER NO. 10031022

1. Enter your computer no. (NOT YOUR NAME) in the space provided on your answer sheets
2. Answer ALL questions by concisely giving factual information without unnecessary overdo BUT without understating the answers either. Each question carries 10 marks
3. Marks may be gained for good presentation of answers and following of instructions.
4. You are encouraged to write in clear legible handwriting – invisible or hard-to-read (small) handwriting may lose you marks.

- 1) Why is ingesting botulinum toxin more dangerous than ingesting tetanus toxin? Why is infant botulinum usually a mild disease?
- 2) List, in each case one (1) disease that may result due to infection with staphylococci in each of the following body area or in each case.

- a) Skin - SSS → Styes
- b) Soft tissues → Styes
- c) Genitourinary tract
- d) Circulatory system → Bacteremia
- e) Central nervous system → meningitis
- f) Musculoskeletal areas → osteomyelitis
- g) Deep tissues → necrotizing fasciitis
- h) Blood stream → septicemia
- i) Pulmonary infections → pneumonia
- j) Toxin mediated infections → food poisoning

1) Resorb
⇒ slow growth
= hard to treat
for resp.

- 3) What are the difficulties associated with the diagnosis and management of Bacteroides infections? Because in involve a lot of other normal flora

- 4) Viruses may be classified in a number of different ways; briefly describe the genomic classification of viruses. in the gas

- 5) Antifungal agents are usually classified into four (4) classes; what are these four classes? Why are fungal infections generally hard to treat?

- 6) How is fungi classified? Briefly describe fungal dimorphism.

Polysergent nature of infection

- 7) How does the replication of HIV generally differ from that of other RNA viruses

- 8) What are the essential enzymes produced in the replication cycle of HIV that are also used as antiretroviral treatment targets.

- 9) What is diarrhea? How does acute and chronic diarrhea differ?

- 10) PNEUMOCOCCUS; the *Streptococcus pneumoniae*, is one of the most virulent bacteria, able to cause a number of different infections. List ten (10) of these infections.

UNIVERSITY OF ZAMBIA
SCHOOL OF MEDICINE
TERM 2 CONTINUOUS ASSESSMENT 2

6459

Wedn 03 February 2016

08.00HRS – 09.30HRS
INSTRUCTIONS

COMPUTER NO.

1. Enter your computer no. (NOT YOUR NAME) in the space provided above
2. Answer all questions by indicating T or F (true or false) against each of the four (4) possible answers in section A, and by writing short notes in section B
3. To avoid encouraging guessing, negative marking will be applicable on the multiple choice section

1. The bacteria which is often Methicillin resistant is::

- ~~ST~~ A. Staphylococcus aureus
- ~~ST~~ B. Staphylococcus epidermidis
- ~~ST~~ C. Staphylococcus saprophyticus
- ~~ST~~ D. Staphylococcus. pneumoniae

2. The bacteria which are inhibited on crystal violet (1:500,000) blood agar, is/are:

- ~~ST~~ A. Streptococci
- ~~ST~~ B. Staphylococci
- ~~ST~~ C. Bacteroides
- ~~ST~~ D. Both (a) and (b)

3. Which of the following Staphylococcal haemolysins does not possess leucocidal activity?

- ~~ST~~ A. α haemolysin
- ~~ST~~ B. γ haemolysin
- ~~ST~~ C. β haemolysin T
- ~~ST~~ D. δ haemolysin F

4. The genus/genera that belongs to the family of ^{pus}Pyogenic bacteria are/is:

- ~~ST~~ A. Micrococcus
- ~~ST~~ B. Staphylococcus
- ~~ST~~ C. Streptococcus
- ~~ST~~ D. All of these

5. Identify the bacteria which is oxidase-negative and catalase-positive with TRUE of FALSE:

- ~~ST~~ A. Staphylococcus
- ~~ST~~ B. Streptococcus
- ~~ST~~ C. Neisseria
- ~~ST~~ D. Pseudomonas

6. Coagulase-reacting factor is necessary for

- ~~ST~~ A. slide coagulase test F
- ~~ST~~ B. tube coagulase test
- ~~ST~~ C. precipitation test

QA5. DNA viruses replicate in the

- a) golgi complex
- b) cytoplasm
- c) chloroplast
- d) nucleus
- e) endoplasmic reticulum

QA6. The following viruses have no animal nor arthropod reservoirs

- a) Polioviruses
- b) HIV
- c) Influenza virus
- d) Measles virus
- e) West Nile Virus

QA7. Haemorrhage in haemorrhagic fevers is caused by

- a) Aetioimmunity
- b) Inflammation of microvascular endothelial cells
- c) Vasodilation of microvascular endothelial cells
- d) Inflammatory cytokines
- e) Viral toxicity

QA8. The following are etiologies of viral encephalitis

- a) Mumps virus
- b) Rabies virus
- c) Herpes simplex virus
- d) Coxsackie virus
- e) West Nile virus

QA9. The cellular receptors for macrophage-tropic HIV are

- a) CD4
- b) CD8
- c) CXCR4
- d) CXCR5
- e) CD14

QA10. Prions are

- a) Infectious proteins without nucleic acid
- b) Viruses without nucleic acid
- c) Pathogenic proteins with native conformations
- d) Pathogenic proteins with altered conformations
- e) Associated with mad cow disease and kuru

QA17. Examples of known oncogenic viruses include:

- a) Herpes zoster
- b) HIV-2
- c) Epstein-Barr virus
- d) Human papillomavirus
- e) Dengue virus

QA18. Write true or false against the following statements

- a) antiretroviral drugs include neuraminidase inhibitors
- b) antiretroviral drugs include hemmaglutinin inhibitors
- c) antiretroviral drugs include integrase inhibitors
- d) antiretroviral drugs include CXCR4 antagonists
- e) antiretroviral drugs include DNA polymerase inhibitors

QA19. Combinational antiretroviral therapy comprises the following:

- a) One NRTI and two NNRTIs
- b) Two NRTIs and one NNRTI
- c) Two NRTIs and one Protease inhibitor
- d) Two NRTIs and one integrase inhibitor
- e) Two NRTIs and one fusion inhibitor

QA20. Haemorrhage in haemorrhagic fevers is caused by

- a) Autoimmunity
- b) Inflammation of microvascular endothelial cells
- c) Vasoconstriction of microvascular endothelial cells
- d) Inflammatory cytokines
- e) Viral toxicity

QA21. The following antiretroviral drugs can prevent latency

- a) Protease inhibitors
- b) Maturation inhibitors
- c) Assembly Blockers
- d) Integrase Inhibitors
- e) Fusion inhibitors

QA22. The following are clinical feature of Dengue infection

- a) fever
- b) shock syndrome
- c) Haemorrhage
- d) Microcephaly
- e) rash

COMPUTER NUMBER:

1	5	6	0	7	1	6	1
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PTM 4310 CA 5; TERM 4 SESSION 2018-19

Tuesday, 9th July 2019

2Hours

Total Marks: 250

INSTRUCTIONS

1. This CA consists of an MCQ section and a Section of a variety of questions, each with marks as stated. MCQ will attract negative marking
2. All the questions must be attempted
3. Use a pen, and make corrections very clear to avoid losing marks.
4. Write your Computer Identification Number clearly **IN THE SPACES PROVIDED ON EACH PAGE**; NOT your NAME.

Multiple choice questions

QA1. Non-enveloped viruses

- a) Have a capsid
- b) Have a lipid membrane
- c) Have a core
- d) Pikes
- e) Always have haemagglutinin

QA2. Single stranded RNA viruses

- a) Have +ve sense RNA
- b) Have -ve sense RNA
- c) Have linear RNA
- d) Have circular RNA
- e) Have segmented RNA

QA3. Prions

- a) Have RNA
- b) Have DNA
- c) Do not have nucleic acids
- d) Do not have proteins
- e) Do not have lipids

QA4. Viruses

- a) Have a complete metabolic machinery
- b) Have no nucleic acids
- c) Lack enzymes
- d) Have no functional organelles
- e) Are metabolically inert outside the host

A 12 year old boy presents with acute onset of sore throat, fever to 38.9 degrees C and painful anterior cervical lymphadenopathy. On exam the pharynx is red and swollen and the tonsils are covered with yellow-white exudate. The child also has halitosis. Which of the following non-suppurative complications are of concern?

- ~~AT~~ A. Sinusitis
~~BT~~ B. Acute rheumatic fever alone
~~CT~~ C. Acute glomerulonephritis alone
~~DT~~ D. Acute rheumatic fever and acute glomerulonephritis

-3

14. Which of the following statements about Group B streptococci (*Streptococcus agalactiae*) is not correct?

- ~~AA~~ A. They are important causes of toxic strep syndrome. (GNP) -2
~~BB~~ B. They are frequent colonizers of the female genital tract.
~~CC~~ C. Screening for this pathogen during pregnancy has reduced the incidence of neonatal sepsis.
2 ~~DD~~ D. These organisms are b-hemolytic

(70 marks)

3

5

SECTION B

SHORT ANSWER QUESTIONS

PLEASE WRITE SHORT NOTES ON THE FOLLOWING (10 marks for each question)

- 1) Why is ingesting botulinum toxin more dangerous than ingesting tetanus toxin? Why is infant botulinum usually a mild disease?
2. (a) In Medical Mycology, what is the difference between a "real" or endemic pathogen and an opportunistic pathogen?
(b) How do most real human mycological pathogens gain entry into the human body?
3. Why is it easier to develop drugs (that don't harm the host) to kill bacterial pathogens of humans than to kill fungal pathogens?

(30 Marks)

Also need

~~4~~ D. none of these

7. Which of the Staphylococci and Streptococci produce coagulase is?

- A. S epidermidis F
 B. S saprophyticus F - 2
 C. S aureus
 D. S nomis F

8. Staphylococcal food poisoning usually manifests itself following ingestion of contaminated food

after

- A. 2-6 hours
 B. 8-12 hours F F
 C. 12-18 hours F F
 D. 18-30 hours F

9. Which of the following Staphylococcal haemolysins does not cause lysis of human RBCs?

- A. β haemolysin
 B. γ haemolysin
 C. α haemolysin
 D. δ haemolysin

10. The toxin of Staphylococcus aureus that may result into scalded skin syndrome is:

- A. Enterotoxin
 B. Leucocidin
 C. Epidermolytic toxin
 D. Haemolysin

11. Which of the following extracellular enzymes produced by Group A streptococci is called "spreading factor," an enzyme important in skin and soft tissue infection?

- A. Streptokinase F
 B. Hyaluronidase F
 C. M Protein
 D. Deoxyribonuclease CT

12. Indicate whether the following statements about the M-protein of Group A Streptococci are TRUE/FALSE

- A. The amino terminal portion (distal portion) is variable, accounting for over 80 distinct serotypes.
 B. M proteins allow streptococci to resist phagocytosis.
 C. Antibodies to M protein confer type-specific immunity.
 D. M protein is the major constituent of the capsule of Group A streptococci.

11
-10

QA11. Retroviruses

- a). Have DNA genomes
- b). Have RNA genomes
- c). Convert DNA to RNA
- d). Convert RNA to DNA
- e). Replicate in the nucleus

QA12. The following are flaviviruses

- a). Influenza
- b). HIV
- c). Yellow fever virus
- d). Dengue fever virus
- e). West Nile virus

QA13. Prions are

- a). Infectious proteins without nucleic acid
- b). Viruses without nucleic acid
- c). Pathogenic proteins with native conformations
- d). Pathogenic proteins with altered conformations
- e). Associated with mad cow disease and kuru

QA14. The cellular receptors for macrophage-tropic HIV are

- a). CD4
- b). CD8
- c). CXCR4
- d). CCR5
- e). CD14

QA15. Influenza viruses possess neuraminidase and haemagglutinin in which are

- a). Structural proteins
- b). Non-structural proteins
- c). Used for attachment
- d). Are drug targets
- e). Very immunogenic

QA16. Positive sense RNA viruses

- a). Require an RNA dependent RNA polymerase for transcription
- b). Do not require transcription
- c). Replicate in the cytoplasm
- d). Replicate in the nucleus
- e). Use their genome as messenger RNA

QA23. The common clinical features of RSV

- a) fever
- b) shock syndrome
- c) wheezing
- d) pneumonia
- e) bronchiolitis

QA24. HIV can infect the following cell types

- a) CD4+ T lymphocytes
- b) CD8+ T lymphocytes
- c) Monocytes
- d) Macrophages
- e) Neurons

QA25. The following play a role in HIV transmission

- a) Viral load
- b) Advanced HIV disease/AIDS
- c) Genital lesions
- d) STIs
- e) Type of unprotected sex

QA26. The following virus are transmitted through faecal-oral contamination

- a) Polioviruses
- b) Hepatitis A virus
- c) Hepatitis B Virus
- d) Hepatitis C virus
- e) West Nile virus

QA27. The oral polio vaccines have the following features

- a) Produces herd immunity
- b) Induces strong gastrointestinal mucosal immunity
- c) Produces both IgG and IgA
- d) Can induce vaccine associated paralytic poliomyelitis (VAPP)
- e) Produces life-long immunity

QA28. The pathogenesis of Dengue haemorrhagic fever involves

- a) T cell activation
- b) Natural killer cell activation
- c) Cascade of cytokine storms
- d) Antibody-dependent enhancement
- e) Complement mediated damage to endothelial cells