

AMREF INTERNATIONAL UNIVERSITY SCHOOL OF MEDICAL SCIENCES DEPARTMENT OF NURSING AND MIDWIFERY SCIENCES KENYA REGISTERED COMMUNITY HEALTH NURSING END OF SEMESTER JANAURY-APRIL EXAMINATIONS 2023

DNS 113: MICROBIOLOGY DATE: WEDNESDAY 19TH APRIL 2023 TIME: 2 Hours Start: 0900 HOURS

Finish: 1100 HOURS

INSTRUCTIONS

- 1. This exam will be marked out of 70 Marks
- **2.** ALL Questions are compulsory.
- 3. The Examination has Three Sections: Section I- Multiple Choice Questions, Section II: Short Answer Questions, Section III: Long Essay Questions
- 4. Answer all Questions in the ANSWER BOOKLET provided
- 5. Do Not write anything on the question paper -use the back of your booklet for rough work if need be.

SECTION I: MULTIPLE CHOICE QUESTIONS (20 MARKS)

- 1. Transcription of HIV Virion from RNA to DNA is aided by,
 - A. Protease enzyme
 - B. Integrase enzyme
 - C. Reverse transcriptase enzyme
 - D. Amylase enzyme
- 2. The following is an autoimmune disease,
 - A. Systemic Lupus Erythematosus
 - B. Malaria
 - C. Covid-19
 - D. Immune Reconstitution Inflammatory Syndrome (IRIS)
- 3. Sore throats are commonly associated with infection by,
 - A. Streptococcus pyogenes
 - B. Neisseria meningitides
 - C. Vibrio cholerae
 - D. Candida albicans
- 4. The following bacterial cells are encapsulated,
 - A. Staphylococcus aureus and clostridium botulinum
 - B. Bacillus Anthracis and mycoplasma pneumonea
 - C. Clostridium tetani and Haemphilus ducreyi
 - D. Staphylococcus albus and Neisseria gonorrhea
- 5. The following bacteria is anaerobic,
 - A. Pseudomonas aeruginosa
 - B. Clostridium tetani
 - C. Escherichia coli
 - D. Mycobacterium tuberculosis
- 6. Culture and sensitivity test is mainly done to,
 - A. Identify the right antibiotic for an infection
 - B. Isolate fastidious bacteria
 - C. Determine the scope of nosocomial infections control in a hospital
 - D. Assess the effectiveness of laboratory services in a hospital

- 7. The Lab diagnosis of Ancylostoma Duodenale is through,
 - A. Identification of ova in stool
 - B. Physical examination
 - C. History taking
 - D. MRI imaging
- 8. Flagellate type of protozoa include,
 - A. Trichomonas Vaginalis and Giardia lamblia
 - B. Trypanosoma gambiense and Balantidum coli
 - C. Entamoeba histolytica and Plasmodium falciparum
 - D. Balantidum coli and Entamoeba histolytica
- 9. The following infections are commonly associated with low body immunity,
 - A. Typhoid and Yellow fever
 - B. Vaginal Candidiasis and cryptococcal meningitis
 - C. Food poisoning and scabies
 - D. Pneumonia and hepatitis B
- 10. Reverse Barrier nursing is recommended for patients with,
 - A. Leukemia
 - B. Typhoid
 - C. Malaria
 - D. Marasmus
- 11. Antigenic material that helps scientists to recognize viruses is,
 - A. Protein
 - B. Nuclear material
 - C. Spores
 - D. Glycoproteins
- 12. Bacterial cells are,
 - A. Serotonin
 - B. Unicellular
 - C. Multicellular
 - D. Associated with sexual reproduction

- 13. The following is a risk factor for resistance to antibiotics,
 - A. Failure to finish taking prescribed antibiotics
 - B. Female gender
 - C. Having infections transmitted by encapsulated bacteria
 - D. Being infected with toxins producing bacteria
- 14. The following is a spore forming bacteria,
 - A. Pseudomonas aeruginosa
 - B. Clostridium botulinum
 - C. Corynebacterium diphtheriae
 - D. Neisseria gonorrhea
- 15. Gene expert test is used to identify causative organism for,
 - A. Tuberculosis
 - B. Leprosy
 - C. COVID-19
 - D. Gastro-enteritis
- 16. The following are roundworms,
 - A. Ascaris lumbricoides and Enterobius vermicularis
 - B. Diphyllobothrium latum and Taenia saginata
 - C. Taenea solium and Schistosoma haematobium
 - D. Echinococcus granulosus and Taenea saginata
- 17. The following is a form of superficial mycosis,
 - A. Oral candidiasis
 - B. Taenea Capitis
 - C. Cryptococcosis
 - D. Madura foot
- 18. Protozoa,
 - A. Are unicellular and smaller in size than bacteria
 - B. Freely live in the air and water
 - C. Have the ability to exist in form of cysts in the soil
 - D. Contain chlorophyll thus can synthesize their own food

19. The following is a round worm,

- A. Enterobius vermicularis
- B. Schistosoma haematobium
- C. Leishmania donovani
- D. Diphyllobothrium latum

20. The general characteristics of the genus Neisseria include,

- A. Gram negative, non-motile and fastidious to grow
- B. Coma shaped, motile and pleomorphic
- C. Coccobacilli, flagellated and gram negative
- D. Kidney shaped, non-motile and non-sporing

SECTION II: SHORT ANSWER QUESTIONS (30 MARKS)

- 1. State five (5) differences between a virion particle and bacterial cell (5 Marks)
- 2. Outline five (5) general characteristics of protozoa (5 Marks)
- 3. State any five (5) micro-organisms associated with food poisoning (5 Marks)
- 4. Explain three (3) predisposing factors to worm infestation in a community (6 Marks)
- 5. List five (5) virulence factors and give a function for each (5 Marks)
- 6. State any four (4) predisposing factors to low immunity (4 Marks)

SECTION III: LONG ANSWER QUESTION (20 MARKS)

 Describe the measures you will take as a nursing manager to reduce transmission of infections among patients in a hospital (20 Marks)