



**AMREF INTERNATIONAL UNIVERSITY**  
**SCHOOL OF MEDICAL SCIENCES**  
**DEPARTMENT OF NURSING AND MIDWIFERY SCIENCES**  
**KENYA REGISTERED COMMUNITY HEALTH NURSING**  
**END OF SEMESTER EXAMINATIONS**

**DNS 113: MICROBIOLOGY, PARASITOLOGY AND IMMUNOLOGY**

**DATE: TUESDAY 5<sup>TH</sup> DECEMBER 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. The following marker is used to detect recent HIV infection,
  - A. Gp 120
  - B. GP 41
  - C. P24
  - D. CD4 count
  
2. The following is an autoimmune disease,
  - A. Systemic Lupus Erythematosus
  - B. Malaria
  - C. Covid-19
  - D. Immune Reconstitution Syndrome (IRS)
  
3. The Viral replication stage that involves dissociation of virion and viral genome is,
  - A. Uncoating
  - B. Penetration
  - C. Biosynthesis
  - D. Assembly
  
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 gonorrhoea
  
5. The following is a form of opportunistic mycoses,
  - A. Ringworms
  - B. Candidiasis
  - C. Histoplasmosis
  - D. Tinea cruris
  
6. Culture and sensitivity test mainly helps to,
  - A. Identify the right antibiotic for an infection
  - B. Isolate fastidious virions
  - 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. *Ascaris lumbricoides* is transmitted through,
  - A. Fecal-oral route
  - B. Blood transfusion
  - C. Sharing of personal items
  - D. Inoculation
  
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. The following is a gram-negative bacterium,
  - A. *Streptococcus Pyogenes*
  - B. *Helicobacter Pylori*
  - C. *Staphylococcus aureus*
  - D. *Mycobacterium tuberculosis*
  
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 gonorrhoea*
15. GeneXpert 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. *Taenia solium* and *Schistosoma haematobium*
  - D. *Echinococcus granulosus* and *Taenia saginata*
17. The following is a form of superficial mycosis,
- A. Aspergillosis
  - B. *Taenia Capitis*
  - C. Cryptococcosis
  - D. Coccidiosis
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 genus Neisseria include ,
- A. Gram negative, non-motile and fastidious to grow
  - B. Coma shaped, motile and pleomorphic
  - C. Cocci bacilli, flagellated and gram negative
  - D. Kidney shaped, non-motile and non-sporing

**SECTION II: SHORT ANSWER QUESTIONS (30 MARKS)**

1. Outline five (5) factors that enhance bacterial growth (5 Marks)
2. Outline five (5) general characteristics of protozoa (5 Marks)
3. State any five (5) non-specific defense mechanisms in the human body (5 Marks)
4. Explain three (3) predisposing factors to food poisoning in a community (6 Marks)
5. State any five (5) examples of hypersensitivity reactions (5 Marks)
6. State any four (4) predisposing factors to low immunity (4 Marks)

**SECTION III: LONG ANSWER QUESTIONS (20 MARKS)**

1. Hospital acquired infections can lead to either patients staying in the hospital for long or incurring higher costs of care. As a nursing manager describe the measures you will put in place to protect patients and their families from hospital acquired infections (20 Marks)