



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

**COURSE CODE AND TITLE: DNS 119 IMMUNISATION**

**DATE: 31<sup>ST</sup> JULY 2023**

**TIME: 2 Hours**

**Start: 2:00 P.M**

**Finish: 4:00 P.M**

**INSTRUCTIONS**

1. This exam will be marked out of 70 marks
2. The Examination has Three Sections: Section A- Multiple Choice Questions, Section B: Short Answer Questions, Section C: Essay Questions
3. Answer all Questions in the ANSWER BOOKLET provided

**SECTION I: MULTIPLE CHOICE QUESTIONS**

**(30 MARKS)**

1. One of the following is true concerning vaccines
  - a. They are given only to treat specific infections
  - b. They are also known as antibodies
  - c. They are used prophylactically
  - d. They are not safe for old people above 65 years
2. Antibodies: -
  - a. Are produced by antigen
  - b. Neutralize the antigens
  - c. Are also known as immunogens
  - d. Can eliminate any form of antigen
3. An attenuated antigen means: -
  - a. It is more virulent
  - b. It can cause a disease in human
  - c. It lacks pathogenic capabilities
  - d. It has been freeze-dried
4. The type of immunity acquired when one recovers from a disease such as covid-19 is: -
  - a. Natural active
  - b. Natural passive
  - c. Artificial active
  - d. Artificial passive
5. Innate immunity is mediated by: -
  - a. Infections
  - b. Recovery from infections
  - c. Antigen-antibody reactions
  - d. Cells like phagocytes
6. The type of immunity that confers immediate protection is: -
  - a. Natural passive
  - b. Natural active
  - c. Herd immunity
  - d. Artificial active

7. The type of immunity that tends to last for long is: -
  - a. Natural passive
  - b. Artificial passive
  - c. Natural active
  - d. Artificial active
8. The type of vaccine that should be avoided in patients in full-blown AIDS symptoms is: -
  - a. DNA recombinant vaccine
  - b. Live vaccine
  - c. Inactivated vaccine
  - d. A conjugate vaccine
9. One of the following vaccine types elicits very poor immune response
  - a. Pneumococcal vaccine
  - b. Pneumococcal conjugate vaccine
  - c. BCG
  - d. Measles
10. Protein based vaccines include: -
  - a. Hepatitis C vaccine
  - b. Measles vaccine
  - c. Inactivated polio vaccine
  - d. Acellular pertussis vaccine
11. Toxoid vaccines include: -
  - a. Oral polio and Sabin vaccines
  - b. Inactivated polio vaccines and Rota virus vaccine
  - c. Rotavirus vaccine and hepatitis B vaccine
  - d. Tetanus vaccine and diphtheria vaccine
12. A monovalent vaccine means: -
  - a. It is given as a single dose only
  - b. It contains a single purified antigen
  - c. It produces mononucleic antibodies
  - d. It is given in a separate syringe from others, as one vaccine
13. Inactive vaccine constituents that helps to increase its shelf-life are known as: -
  - a. Diluents
  - b. Antimicrobials
  - c. Preservatives
  - d. Stabilizers

14. One of the following is true concerning vaccine diluents: -
- They are can be used for any vaccine
  - They must be frozen to maintain their potency
  - Are specific to a vaccine
  - They must be fat-soluble
15. An ideal vaccine should be: -
- Given at least two to three dosages
  - Given parenterally
  - given to protect only one type of infection
  - stable in field temperatures
16. A baby who presents to the health facility for the first time at 3 weeks should be given: -
- A return date to fit within the DVI vaccination schedule
  - BCG vaccine and oral polio vaccine birth dose
  - BCG vaccine only
  - Pentavalent vaccine 1 and BCG
17. Master X got his childhood vaccine at birth and at 6 weeks after birth. He then was never seen in the health facility for 3 three months. On presenting to the health facility, the nurse: -
- Should scold the mother for negligence
  - Start the vaccination schedule afresh
  - Continue with vaccination from where he stopped and mother given health education
  - Teach the mother on importance of vaccine and report her to the children department
18. An HIV exposed baby is presented to the clinic at 8 months for the first time since birth, the nurse: -
- Informs the mother to bring the baby at 9 months to get measles vaccines
  - Gives BCG, pentavalent 1, OPV 1, PCV 1 and measles vaccine
  - Gives BCG and measles vaccines only and records on the mother-child health booklet
  - Gives vitamin A and advises the mother to bring the child at 9 months for measles vaccine
19. Food handlers should be vaccine against: -
- Rabies
  - Typhoid
  - Tetanus
  - Tuberculosis
20. The most appropriate vaccine for veterinary doctors is: -
- Tetanus vaccine
  - Typhoid vaccine
  - Rabies vaccine
  - Anti-snake venom

21. The nurse is administering BCG vaccine to a child brought to the clinic for the first time at 13 months of age. The correct dose she administers is: -
- 0.5ml
  - 0.005ml
  - 0.01ml
  - 0.1 ml
22. The nurse receives a baby for BCG vaccine just one hour before closing her shift at 5pm. There are no other children for the vaccine. The correct action she takes is: -
- Ask the mother to bring the child the following day for vaccine
  - Open the multi-dose vial and administer the vaccine
  - Tell the mother to be coming to clinic in the morning and close the clinic
  - Tell the mother there are specific days for BCG vaccines administration and she should come on it.
23. The nurse is about to administer BCG vaccine when s/he realizes there are no BCG syringes. The nurse should: -
- Use the 1cc syringes available in the clinic
  - Use insulin syringes since they are similar
  - Suspend the administration and go look for the syringes
  - Refer the mother with her baby to another facility
24. At the end of vaccination, the nurse realizes the BCG vial diluted 8 hours ago has 8 doses remaining. Just then, a mother walks in with a new born baby. The nurse should: -
- Give the already diluted BCG vaccine
  - Discard the old vaccine and open a new vial and give the baby the BCG vaccine
  - Vaccinate the baby with the already diluted vaccine and return the remainder to the refrigerator
  - Check the vaccine vial monitor, if still valid, administer the vaccine to the baby
25. Concerning administration of BCG vaccine to babies exposed to TB: -
- Isoniazid Preventive Therapy (IPT) is be given for 6 months, If TB disease is ruled out, BCG is given 2 weeks after completion of IPT
  - Mothers antibodies were passed to the baby during breastfeeding, thus the BCG should be omitted and the same documented
  - The baby should be immunized regardless of the TB disease status
  - This baby also has HIV, so avoid BCG vaccine to prevent possible complications
26. The most heat sensitive vaccine is: -
- Inactivated polio vaccine
  - BCG
  - Measles
  - Oral polio vaccine

27. A nurse noticed that a baby spat out the oral polio vaccine. The correct action s/he takes is: -
- Record the baby spat out the drug and ask mother to bring the child after 4 weeks
  - Repeat the administration of the vaccine
  - Change to injectable inactivated polio vaccine
  - Put the oral vaccine into a spoon and add some sugars to allow the baby to swallow
28. The Ministry of Health (MoH) has planned a polio immunization campaign for the entire country. A mother whose baby got the regular scheduled OPV 2 last week calls the nurse to ask if her child should receive the supplemental polio vaccine. The nurse correctly responds: -
- “No! your child is already fully vaccinated”
  - “ Yes! But then there will be no need to bring your child for the OPV 3”
  - “ Yes! And make sure you bring the child as scheduled for the OPV 3 and other vaccines”
  - “It up to you to decide! the risk of your child getting polio disease are minimal as your child is already vaccinated”
29. The reason for administering inactivated polio vaccine (IPV) despite a child having received all the doses of OPV is: -
- To adhere to immunization guidelines
  - To close the gap created by administering bivalent OPV
  - To prevent reinfection with wild polio viruses
  - To provide local immunity
30. Pentavalent vaccine may prevent the following hepatitis diseases
- Hepatitis A
  - Hepatitis B
  - Hepatitis C
  - Hepatitis E

**SECTION II: SHORT ANSWER QUESTIONS****(40 MARKS )**

1. State eight (8) strategies of of minimizing missed opportunities in immunization programs (8 marks)
2. Outline five (5) documents to be filled in an immunization program activity (5 marks)
3. State five (5) nursing interventions for a child suffering from anaphylactic reaction post vaccine administration (5 marks)
4. The cold chain must be maintained within an optimum temperature between +2 to +8 °C at the facility level.
  - a. State five (5) tools that a nurse uses to monitor and maintain these temperature ranges (5 marks)
  - b. Outline five (5) challenges a nurse may face while trying to maintain the cold chain of vaccines in the health facility (5 marks)
5. State four (4) reasons why a nurse should conduct vaccine forecasting needs for a health centre (4 marks)
6. Outline five (5) causes of vaccine wastage in immunization programs (5 marks)
7. List three (3) special population considerations in immunization programs and name one vaccine for each special population group (3 marks)