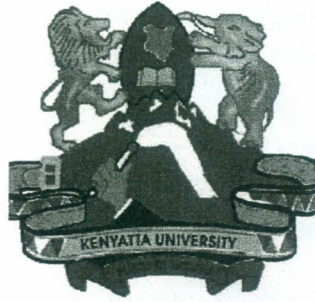




KENYATTA UNIVERSITY
DEPARTMENT OF MEDICAL MICROBIOLOGY AND PARASITOLOGY
HPA 200: PATHOLOGY I JOINT CAT

Date 29th March, 2023

Time 9.00 AM - 12.00PM

INSTRUCTIONS:

1. This paper is composed of 50 questions
 2. Each question is worth 2 marks
 3. Answer all the questions
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1. a) Name the lesion
b) Name the common cause of the lesion in this region
 2. a) Identify the pathology
b) State the common source of the pathology
 3. a) State two gross findings
b) Name the pathology
 4. a) State the gross findings
b) Name the lesion
 5. a) State the gross morphology
b) Name the lesion
 6. a) Name the tumor
b) State two reasons for identification of the tumor in (a) above
 7. a) State if the tumor shown is benign or malignant
b) Give reasons for your answer in (a) above.
 8. a) Name the possible parasitic cause of the condition shown
b) State its infective stage

9. a) Identify the parasitic helminth shown
b) State the drug of choice for the treatment of the clinical condition associated with it.
10. a) State the disease(s) caused by the parasite shown
b) Name the intermediate host and infective stage(s)
11. Identify the trematodes represented by the ova shown
 - a) 1.....
 - b) 2.....
 - c) 3.....
 - d) 4.....
12. a) Give the scientific name and stage of the parasite shown
b) State the importance of the stage of parasite identified in (a) above in the development of infection in man
13. The following organisms serve as biological intermediate hosts for cestodes and trematodes. Name the stage of the parasite inside the intermediate host
14. a) Name the parasite that causes the condition shown
b) State two possible specimens used to diagnose this parasite
15. a) Identify the parasitic organism shown
b) State two modes of transmission of the parasite identified in (a) above
16. a) Identify the medical condition shown.
b) List two birth defects that would occur if this infection occurred in first trimester of pregnancy
17. a) Name the virus that caused the condition shown in this image
(b) Identify the host immune cells that is mainly infected by this virus
18. a) Identify the virus shown in the photo
b) Name the cell compartment in which genome replication of the virus identified in (a) above takes place
19. a) Identify the virus responsible for the condition shown
b) List two preventive measures for the condition shown
20. a) Identify the medical condition shown
b) Name the causative viral agent for this condition
21. a) Name the HIV strain that was transmitted to humans through this primate
b) Name an antiviral drug that blocks virus cell fusion for the above listed virus

22. a) Identify the causative viral agent for the condition shown
b) Name one condition that would result if infection by virus in (a) above occurred in utero
23. a) Interpret the test
b) Name two organisms that can be identified using this test
24. a) Identify the bacteria on the media
b) Explain how you arrived at your answer in (a) above
25. State the indicators of a positive urinary tract infection on this test
26. a) Interpret the test
b) Name two organisms that can be identified using this test
27. a) Identify the media
b) Explain how you arrived at your answer in (a) above
28. a) Identify the media
b) State its use in clinical bacteriology
29. a) Interpret this test
b) State the principle of the test
30. a) Identify the clinical manifestation shown in the photo
b) Name the organism commonly implicated in the condition shown in (a) above
31. a) Name the organism causing the infection shown
b) List two antimicrobial agents used to treat the infection shown
32. a) Identify the media
b) State its use in the clinical laboratory
33. a) List two risk factors that can predispose someone to the infection shown
b) Name two antimicrobial agents that lead to the infection shown
34. a) Name the special staining technique used in diagnosis of the infection above
b) Name two biochemical tests used in the isolation of the causative organism of the infection shown
35. The organism shown was obtained from a patient who complained about sudden chills, fever and a productive cough. Gram stain of the smear revealed a gram positive lancet shaped bacterium *S pneumoniae*
a) State the mode of action of any virulence factor produced by the organism shown
b) List two drugs used for the treatment of the infection caused by organism above

36. a) Identify the infection shown in the photo
b) Name two biochemical tests used in the identification of the organism causing the infection in (a) above
37. a) Identify the equipment
b) State one probable cause of a false positive test involving this equipment
38. a) Identify the positive pregnancy test
b) Explain the reaction in the positive test
39. Explain the principle behind the diagnostic test represented
40. a) State the type of test shown for determining the amount of anti-SARS-CoV-2 IgG
b) Identify the patient sample with the highest concentration of IgG
41. Explain the principle behind the positive test in this rapid diagnostic test
42. State how complement is involved in the aetiology and pathology of the condition shown.
43. a) Identify the type of antigen represented by X in the figure
b) List two cytokines triggered by the binding of the molecule identified in (a) above
44. a) Identify the lesion in the liver of schistosomiasis patient
b) Name two immune cells that are key in the formation of the lesion
45. a) Identify the parasite in the macrophage shown in the photomicrograph
b) State one strategy used by the parasite to survive in the macrophage
46. a) Identify the immune cell shown
b) State its main mechanism of action against its target pathogen
47. a) State the type of technology used in the generation of SARS-CoV-2 vaccine in the vial shown
b) State the main protection the vaccine provides its recipients
48. a) Identify the innate immune cell shown
b) State one way the cell in (a) above identifies virus-infected target cells
49. The photograph represents an observation following a complement fixation test. Explain the observation
50. This photograph shows results for an ELISA test for anti-HIV IgG antibodies from patient blood samples. Patient B is a two months old infant. State the interpretation of the test results for patient B