



KENYATTA UNIVERSITY

SUPPLEMENTARY/SPECIAL EXAMINATION 2020/2021

BACHELOR OF MEDICINE AND BACHELOR OF SURGERY (MBChB LEVEL II)

HPA I : PATHOLOGY I PAPER III: PRACTICALS

MARCH, 2022

TIME: 2 HOURS

INSTRUCTIONS:

- Attempt All The Questions In The Booklet Provided
- Each Question Is Worth Two Marks

1. a) List two gross findings
b) Name the mechanism of these gross findings
2. Classify lesions A and B
3. a) Identify the abnormality
b) State one cause
4. a) State the gross finding
b) Name the lesion
5. a) Name the lesion
b) Name the common source of the lesion
6. State any two possible causes of a false positive result of the test for which this equipment is used
7. a) Name the test shown for determining the concentration of human IgG
b) Identify the patient with the highest concentration of IgG
8. a) Identify the cell
b) State the function of the cell

9. a) Name the cell
b) State the cell's mechanism of action against parasites
10. a) Identify the disorder caused by the karyotype shown:
b) List two clinical features of the disorder named in (a) above
11. a) State the diagnosis for the genetic disorder shown by the patient in the photograph
b) State the chromosomal complement for the disorder named in (a) above X0
12. a) Name the environmental pollutant responsible for the disorder shown
b) List the two other symptoms of the poisoning
13. a) What disease does the test demonstrated diagnose
b) State any two symptoms of the disease
14. a) Name the test demonstrated
b) The test checks for antibodies indicating which disease
15. a) Identify the procedure shown
b) State the role of Ether and Formalin in this technique
16. a) Classify the specimen shown
b) State the clinical disease caused by the organism shown.
17. a) State the clinical disease and stage of parasite shown
b) State two intermediate hosts of the parasite shown
18. a) Identify the parasite shown
b) State the main clinical outcome associated with the parasite shown in (a) above
19. a) State the scientific name of the parasite shown
b) State the intermediate host and mode of transmission of this parasite
20. a) Identify the specimen shown
b) State the clinical disease caused by the parasite involved

21. a) Name the clinical condition shown
b) State the scientific name of the arthropod responsible for the condition shown
22. a) Name the clinical procedure shown
b) Name one arthropod commonly used in the procedure shown
23. a) Name the clinical condition shown
b) Name one protozoan parasite responsible for the condition shown
24. a) Identify the specimen shown
b) State the clinical disease caused by the parasite involved
25. 5.0×10^3 human foreskin fibroblasts were seeded in each well of a 6 well-plate, and 0.5mls of 10^4 PFU/mL HPV virions were used to infect the fibroblasts. Calculate the MOI.
26. a) Identify the medical device
b) State the use of the medical device
27. a) Identify the virus stained below
b) Genome replication of this virus takes place in which compartment of the cell?
28. a) The condition below is caused by which virus
b) Identify the host organ that is targeted by this virus
30. a) Name the skin condition below
b) Name the vaccine that is used to prevent this infection
31. a) Identify the test
b) How is the test in (a) above useful in identifying certain groups of bacteria

32. The organism shown on the slide was isolated from a carbuncle of an inpatient
- Identify the most probable organism
 - Name one toxin mediated infection caused by the organism in (a) above
33. The infection demonstrated in the picture was recovered from a non-immunized 3-year-old boy who complained of sore throat and had fever and headaches.
- Identify the infecting organism
 - As the attending clinician, what would be your course of action?
34. a) Identify the test
- Interpret the results
35. a) Identify the test
- Explain the principle behind the test
36. A culture of skin lesions from a patient suffering from the skin condition illustrated on the photo showed numerous colonies surrounded by zone of beta hemolysis on a blood agar plate.
- A gram -stained smear showed gram positive cocci. If you found the catalase test to be negative:
- The most probable organism that you had isolated is
 - Name the drug of choice for treatment of the infection shown
37. a) Identify the apparatus
- State what it is used for in a diagnostic laboratory
38. a) Identify the apparatus
- Outline its use in a pathology laboratory
39. a) Name any TWO pro-inflammatory cytokines most likely to be associated with immunopathology in ~~part A~~ of the diagram
- Name the two T cell subsets that could mediate tissue injury in ~~part B~~ of the diagram

40. a) Identify the abnormality
b) Name the structure of diagnostic importance at the centre.
41. a) Identify the photomicrograph
b) State its diagnostic significance
42. a) Interpret the test
b) Name two organisms that are identified using this test
43. a) Identify the bacteria on the media
b) Explain how you arrived at your answer
44. a) Identify the test
b) Explain the principle behind the test
45. a) Identify the media
b) State its use in clinical bacteriology
46. a) Identify the causative organism of the infection shown
b) Name two topical antifungal drugs used in the treatment of the infection shown
47. a) Outline the mode of action of the drug shown
b) List two organisms whose infections are treated with the drug shown
48. A 20-year-old pregnant lady presents to the clinic with a 2-week history of flu-like symptoms. Physical examination reveals a generalized nontender lymphadenopathy and numerous cutaneous lesions on the back as shown in the photograph.
- a) State one specific test for diagnosis of the infection
b) Name one virulence factor that enables the organism to cause the infection above.