TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL SCIENCES

UNIVERSITY EXAMINATION FOR THE:

DIPLOMA IN MEDICAL LABORATORY SCIENCES

(DMLS)

AML 2313: MUSEUM & MAUSOLEUM TECHNIQUES

SEMESTER: EXAMINATION

SERIES: AUG 2019

TIME: 2HOURS

Instructions to Candidates

You should have the following for this examination
-Answer Booklet, examination pass and student ID
This paper consists of **TWO** section **A** and **B**.
Answer **All** question in section **A** and **B.**
This paper consist of 8 printed pages.

SECTION A (40 Marks)

1. The embalming fluid known as cavity fluids is
   A. Injected into cavities of the body
   B. Injected into arteries
   C. Used for mounting specimen
   D. Injected into the liver

2. In embalming, preservation is
   A. The secondary purpose
   B. The primary purpose
   C. The tertiary purpose
   D. Mounting of the body

3. Record keeping and storage of reported slides in Histology has one of the following reasons
   A. Medical legal situations
   B. To please the manager
   C. To create jobs for laboratory personnel
   D. Just for display

4. Museum specimens can be recovered from
   A. Mortuary
   B. Inchange's office
   C. The ward
   D. General laboratory

5. The following solution can be used as primary fixative in museum laboratory
   A. 10% neutral buffered formal saline
   B. 40% formaldehyde
   C. 100% alcohol
   D. 1% acid alcohol

6. In a museum laboratory Kaiserling solution II can be used for
   A. Colour restoration
   B. Fixing
   C. Mounting
   D. Staining

7. Kaiserling fluid I is made up of
   A. Potassium acetate
   B. Potassium chloride
   C. Potassium bicarbonate
   D. 80% Ethyl alcohol

8. The natural colour of museum specimen can be lost after
   A. Primary fixation
   B. Mounting
   C. Emmersion in 80% ethyl alcohol
   D. Staining

9. The most important ingredient in Keiserling fluid III is
   A. Potassium nitrate
   B. Potassium acetate
   C. Glycerine
   D. Potassium carbonate

10. What characteristic must the method used in storing museum specimen have?
   A. Must permit certain identification of each specimen
   B. Must allow specimen to dry
   C. Must leave container open all the time
   D. Must contain alcohol only

11. Main aim of embalming is
   A. Just for display purposes
   B. Prevent spread of disease and preserve the body
   C. For mounting the body
   D. To prevent the body form decomposing after burial

12. Embalming fluids include
   A. Kaiserling solution III
   B. 60% formaldehyde
   C. 1% Acid alcohol
   D. Kaiserling solution A

13. The following steps can be used for handling museum specimen except
   A. Fixation
   B. Preservation
   C. Presentation
   D. Colour restoration

14. Disadvantages of using formaldehyde in embalming include
    A. Does not coagulate blood rapidly
    B. Does not deteriorate with age
    C. Dehydrates the tissues
    D. It restores colour

15. The following bacteria can be demonstrated in tissues
    A. Mycobacterium tuberculosis
    B. E. hystolytica
    C. Fungi
    D. Cryptococcus

16. Fungi in tissues can be demonstrated mainly by
    A. Methanamine silver technique
    B. Papanicolon technique
    C. H/E technique
    D. ZN technique

17. In shipment of dead body, the body is treated as cargo and labeled
    A. Pathological specimen
    B. Human remains handle with care
    C. Human being
    D. Dead body

18. The dead body is allowed to be transported for burial if:
    A. Is unclaimed after certain period of time
    B. Brought by police
    C. Is embalmed
    D. If from the wards

19. Type of death include
    A. Coma
    B. Somatic death
    C. Asphyxia
    D. Cell death

20. Arterial fluids in embalming are classified into
    A. Category A and C
    B. Category A and B
    C. Category A and 3
    D. Category F

21. Post mortem changes involves
    A. Embalming
    B. Staining
    C. Fixation
    D. Decomposition that causes chemical and protein changes

22. Embalmer's eczema is caused by
    A. Formaldehyde
    B. Phenol
    C. Normal saline
    D. Tap water

23. One of the triple effects of phenol in embalming is
    A. Fixation
    B. Staining
    C. Autolysis
    D. Mounting

24. To enhance the odour of embalming solution the following can be used
    A. Potassium acetate
    B. Potassium nitrate
    C. Lilac oils as deodorant
    D. Formaldehyde

25. Humectants are used in embalming
    A. To control tissue moisture balance
    B. Acts as surface disinfectant
    C. To main blood in liquid state
    D. To staining tissue

26. The choice and design of museum jars depends on
    A. Size and sight interest
    B. The laboratory manager
    C. The Government
    D. Availability of fluids

27. Faults in museum specimens include
    A. Breaking up of dryable soft specimens
    B. Staining artifacts
    C. Thin and thick sections
    D. Chatters

28. Museum specimens should
    A. Be put is tap water
    B. Be left at bottom of the container
    C. Not be left to dry
    D. Should touch the sides of container

29. Whole organs like kidney should always be
    A. Injected with fixative
    B. Washed in tap water
    C. Fixed in 40% formaldehyde
    D. Immersed in absolute alcohol

30. The pH of Karserling solution III should be adjusted to
    A. pH 7.0
    B. pH 8.0
    C. pH 6.0
    D. pH 3.0

31. Specimens should always be handled in Kaiserling solutions to
    A. Avoid distorting
    B. To avoid drying
    C. To destroy microorganism
    D. To distort the tissue

32. Centre plates are used in
    A. Mounting fluid
    B. Tab water
    C. 10% formal saline
    D. Staining fluid

33. Museum specimens must be in closed containers to
    A. Avoid staining
    B. Avoid mounting
    C. Avoid fixation
    D. Avoid contamination, drying and to destroy the Specimen.

34. Perl's Prussian blue technique demonstrates
    A. Hemosiderin
    B. Fungi
    C. Amyloid
    D. Fat

35. In museum laboratory, kaiserling solution II is used for
    A. Fixation
    B. Mounting
    C. Staining
    D. Restoration of colour

36. The primary goals of quality assurance is
    A. To provide accurate and reliable results
    B. To provide unreliable results
    C. To give good results
    D. To make work easy.

37. The following is vital when you what to facilitate diagnosis of fungal infections
    A. Fungal morphology
    B. Report results as positive or negative only
    C. Remove the specimen using 80% alcohol
    D. Put the specimen in Kaiserling solution I

38. Any museum specimen is handled by following steps except:
    A. Fixation
    B. Restoration
    C. Preservation
    D. Presentation

39. Bacteria that can be demonstrated in tissue include:
    A. HIV
    B. E. coli
    C. Mycobacterium tuberculosis
    D. Cryptococcus

40. The anticoagulant in embalming helps to prevent clots and it is divided into:
    A. Precipitants
    B. Soluble Calcium
    C. Clotting
    D. Coagulation

SECTION B (60marks)

41. (i) Discuss the process of modern embalming technique. **(20 marks)**

    (ii) Explain steps used to handle museum specimens **(20 marks)**

42. Write briefly on
    (a) Post mortem changes
    (b) Classification of arterial fluids in embalming
    (c) Demonstration of bacteria in tissues using gram stain technique
    (d) Preservation as a secondary purpose of embalming.

(20 marks)