KISII UNIVERSITY

NYAKONGO TOWERS

MELS0211: HISTOPATHOLOGY AND CYTOLOGY

STREAM: **TIME:**

DAY: **DATE:**

INSTRUCTIONS

1. **Do not write anything on the question paper.**
2. **The paper contains sections A, B and C.**
3. **Section A: compulsory multiple choices (MCQ). Answer all questions by choosing the appropriate answer among four.**
4. **Section B: compulsory short essay questions. Answer all questions in this section.**
5. **Section c: long essay questions, choose any one question and answer it correctly.**

SECTION A: ANSWER ALL QUESTIONS BY CHOOSING THE CORRECT ANSWER

1. Histology is the study of:-
    a. Abnormal body tissues
    b. Normal body tissues
    c. Diseased body tissues
    d. History of disease that affect body tissues

2. Postmortem specimens are referred to as:-
    a. Autopsies
    b. Biopsies
    c. Histology
    d. Pathology

3. Use of chemical reactions to determine the presence of important organic and other molecules within the cells and tissues is referred to as:-
    a. Biochemistry
    b. Histology
    c. Histochemistry
    d. Fluorescence microscopy

4. Specimens for histological examination obtained during surgery are called?
    a. Autopsies
    b. Biopsies
    c. Human pathology
    d. Human tissues

5. Tissues that have been sliced or cut for microscopic examination are called?
    a. Biopsies
    b. Autopsies
    c. Sections
    d. Pathology

6. The following are physical methods for determining the composition of cells and tissues. Which one is NOT:-
    a. Fluorescence microscopy
    b. Chemical reactions

c. Scanning electro – probe micro analysis
d. Autoradiolograpy

7. The technique selected for tissue preparation for microscopic examination is governed by the factors. Which one is NOT:-
   a. The amount and nature of the tissue
   b. Urgency of the investigation
   c. Type of tissue whether fresh or preserved
   d. None of the above

8. Teased preparation of tissue is preferred when studying.
   a. Cellular contents of the tissue
   b. Mitosis fats
   c. Enzymes

9. Fresh enzymes can be examined as: Which one is NOT?
   a. Frozen tissue
   b. Smears
   c. Teased preparation
   d. Preserved tissue

10. Post mortem changes that occur in tissues are called?
   a. Putrefaction and autolysis
   b. Pyknosis
   c. Karyorrhesis
   d. Karyolsis

11. Postmortem changes can be retarded or prevented in chemical substance known as?
   a. Preparations
   b. Fixatives
   c. Autolysis
   d. Acids

12. Squashed preparation of tissues is good when studying?
   a. Cellula contents
   b. Mitosis
   c. Fats
   d. Enzymes

13. Which one among the following is a desired quality of a good fixative:-
   a. It must have a bad effect on stains

b. It should be expensive
c. It should produce irritant vapors
d. It must inhibit antolysis

14. The following are simple fixatives. Which one is NOT:-
a. Formaldehyde
b. Mercriric chloride
c. Zenker fluid
d. Acetone

15. The following are micro anatomical fixatives. Which one is NOT:-
a. Formal sublimate
b. Helley's fluid
c. Suza heldenhain
d. Acetone

16. Secondary fixation is done to improve:-
a. Preservation and staining of tissues
b. Quality the tissue
c. Analysis of the tissue
d. None of the above

17. Decalcification of tissue is done through the following methods. Which one is NOT:-
a. Use of mineral acids
b. Use of ion exchange resin
c. Use of cahlating agents
d. None of the above

18. A physical method of determining end point of decalcification is done through?
a. Mechanical and X-ray methods
b. Ion exchange resin method
c. Biochemical methods
d. Electrolysis method

19. Dehydration of tissues is?
a. Removal of water from tissues
b. Removal of acids from tissues
c. Removal of calcium from tissues
d. Addition of water in micro liters to tissues

20. Chemical substances which are made up of two simple fixatives are called?
    a. Simple fixative
    b. Compound fixative
    c. Superior fixative
    d. Concentrated fixative

21. A good decalcifying fluid should:-
    a. Be very dilute
    b. Be acidic
    c. Be kept in a brown bottle
    d. Not impair subsequent staining

22. Tissue dehydrants include:-
    a. Xylene
    b. Chloroform
    c. Pyridine
    d. Carbon descide

23. The following tests are done to determine the end point of decalcification except:-
    a. Mechanical probing
    b. X –rays methods
    c. Probing with needle
    d. Ion exchange resin(is a method of decal)

24. Paraffin wax can be used as:-
    a. Softening agents
    b. Mounting media
    c. Embedding media
    d. Plasticizer

25. Washing out is mainly done on tissues that are:-
    a. Fixed in 10% formal saline
    b. Cleared in saline
    c. Fixed in potassium dichromate
    d. Dehydrated in alcohol

26. Vacuum impregnation is done under reduced pressure and it enables:-

a. The clearing agent and air to rapidly removed from tissues
b. The clearing agent and air to penetrate deeply into the tissue
c. The clearing agent to mix toughly with the air
d. The clearing agent to support impregnating media

27. The following are microtones that are commonly used. Which one is NOT:-
a. Cambridge rocker
b. Base sledge
c. Pyridine
d. Sliding

28. The following are knives used in histology for section cutting. Which one is NOT:-
a. Plano concave
b. Biconcave
c. Cryostat
d. Plane wedge

29. Which one of the following is advantage of ester wax:-
a. Has low melting point
b. Has high melting point
c. Do not provide ribbons
d. None of the above

30. Benzene is used in tissue processing as:-
a. Dehydrating agent
b. Clearing agent
c. Impregnanting agent
d. Embedding agent

SECTION B: ANSWER ALL QUESTIONS (20MARKS)

1. Outline differences between Benin and malignant tumors

   10marks

2. Mention five ways through which malignant tumor can spread

   5marks

3. Define the following:-

   a. Define cytology

      2marks

   b. Define prognosis

      2marks

   c. Define aetiology

      1mark

SECTION C: ANSWER ANY THREE QUESTIONS (60MARKS)

1. Discuss four causes of death in malignancy

   20marks

2. Discuss four types of cytological specimen with special emphasis on collection and analysis

   20marks

3. Discuss four solutions of fixatives used on cytological smears

   20marks

4. Discuss papanicolaou staining method under the following

   20marks

   a. Principle

   b. Method/ procedure

   c. Microscopic examination