



# **TECHNICAL UNIVERSITY OF MOMBASA**

***Faculty of APPLIED AND HEALTH SCIENCES***

DEPARTMENT OF MEDICAL SCIENCES

FACULTY OF APPLIED AND HEALTH SCIENCES

CMLS 13 M MID ENTRY

## **AML 1107: HISTOLOGY**

END OF SEMESTER EXAMINATIONS

**SERIES:** DECEMBER 2013

**TIME:** 2 HOURS

### **INSTRUCTIONS:**

1. Attempt all Questions
2. This paper consists of Nine printed pages

## SECTION A

1. The following are associated with embryology except.
  - A. Morulla
  - B. blastute
  - C. blastmere
  - D. gastrota
  - E. karyoxhexis
  
2. The following are associated with a Gsatrula except
  - A. Extodem
  - B. Endodem
  - C. mesodem
  - D. Endocynous
  
3. The following are connective tissue cells except
  - A. Plasma cells
  - B. Histiocyte
  - C. floroblasts
  - D. MAST cells
  - E. Alveolar cells
  
4. The following are connection tissue fiber except
  - A. Elastic
  - B. Basement membrane
  - C. Reticulin
  - D. Ground sutotine
  
5. The following are types of siple epithelium except
  - A. cuto
  - B. columnner
  - C. psendostratified ciliated columnar
  - D. squamous
  - E. keratimized
  
6. The following are types of stratefed epithelusm except
  - A. Trasitional
  - B. columnar
  - C. squamour keralunged
  - D. mixed stratified
  - E. Goblet cells

7. The following are causes of Necrotion except

- A. specialization
- B. Hormonel change
- C. Accumulation of water
- D. Nomadic life

8. Accumulation of rables causes the following except

- A. Loss of elability
- B. Increase on collagen fibre
- C. Affecting of joints
- D. Hardening of arteries
- E. Bleeding of gums

9. Death can be caused by the following except.

- A. Disease
- B. Ageing
- C. lying
- D. swimming

10. The following are cell indusions except

- A. Nuclear
- B. Glycogen
- C. fats
- D. secretory granules
- E. lysosome

11. The following are cell organalles except

- A. Mitochondria
- B. Golgi apparatus
- C. ysosomes
- D. Endsplasmic Reticulum
- E. Nucins

12. The following structure are found in the nuclear except

- A. Cycoskeleton
- B. Chromatic granules
- C. Nuclear membrane
- D. Karysome
- E. Nucleolus

13. The following are found in a cytoplasm except

- A. Organelle
- B. Cohesions
- C. Cell membrane
- D. Chromatic granules
- E. Endoplasmic Reticulum

14. The following functions of mitosis except

- A. Repair
- B. Replacement
- C. growth
- D. genetic variation

15. The following occurs in telophase meiotic except

- A. Cytoplasmic elongates and
- B. Calaract
- C. Eyebrows
- D. Tumours

16. The following occurs in meiosis except.

- A. Lepteme and zygotem
- B. Parcytem and Diplot
- C. Homologons lecom and Diaciusesis
- D. G<sub>2</sub> interphase splitting of centromere in meiosis
- E. Haphod daughter cell formation and chromosomal crossover.

17. The following are effects of fixtues except

- A. Aids/inhibits daily
- B. Reuter tissue cells tuseusilute to htpertthpotovie solute
- C. Dllers re of tissue cells for allow differentiation
- D. Hardene tissue allow manipulation
- E. Soften the tissue is allow

18. The following is a criteria of a good fixture except

- A. Cause sudden death in tissue cells
- B. Render solubity of the cells
- C. Penetrates tissue quickly and evenly
- D. Penetrates at a later stage application of slowing procedures
- E. Make all nuclei soluble

19. The following are O.T except
- A. Preserve Golgi apparatus and mitochondria
  - B. For minute tissue and electric microscopy
  - C. Demonstrates and fixes fats
  - D. Permanently fixes fats and renders it insoluble
  - E. Good for chrome levels
20. The following are elements of excepts
- A. Poor penetration and expensive
  - B. Poor and causes
  - C. Blackening and
  - D. Reduced by organic matter
  - E. Radio
21. The following are demerits of  $HgCl_2$  except
- A. Poisonous and corrosive
  - B. Radio opaque
  - C. Leaves a black precipitate
  - D. Excessive shrinkage
  - E. Iodulosis
22. The following are merits of formalin except
- A. Stains minute tissue
  - B. Corrosive good for inchrome methods
  - C. Differentiator
  - D. Permanent
23. The following are merits of formal saline except
- A. For pm and cns
  - B. For direction
  - C. Preserve fats for frozen sections
  - D. Tissue is left undistorted
  - E. Causes shrinkage
24. The following are stains except
- A. Gram stain
  - B. Trichrome stain
  - C. Potassium dichromate
  - D. Carmalum fluid
  - E. Osmin tetroxide

25. The following are micro fixtures except

- A. 10% formal saline and neutraa suffered fromal
- B. 10% formalin and formal subllinate
- C. Heiden hains susa sna Bouns fluid
- D. Tewery fluid and zenkers formal
- E. Orter fluid and champy fluid

26. The following are nuclear fratives exept

- A. schautus
- B. casuoys
- C. Bonine
- D. Flemings cycte acid

27. The following are cytoplasmic fixatives except

- A. Orter tend and muller's fluid
- B. Champys tend and rejands fluid.
- C. 10% formal saline and formal
- D. Fleming fluid Glorial
- E. Flemmy tend +Glual alkaline acid

28. The following are secondary fixative except

- A. Mercuric chloride
- B. Heiden haurs
- C. Zenlers formal
- D. Formal suflumate
- E. Boanis fluid

29. The following are Histochemical fixture except

- A. Cold acetone
- B. Cold absolute alcohol
- C. Neutras buffered formalin
- D. 10% formal saline

30. The following are vapour fixatives except

- A. Gluty dehyde
- B. Chronic acid dehyde
- C. Formal dehyde
- D. Acolyte dehyde
- E. Osmin techoxide

31. The following are exfoliative cytology fixative except

- A. Eucy alcohol
- B. Tparts 3<sup>0</sup> bucly alcohol 3 parts 5% alcohol
- C. Sdeaudeas
- D. Ortes
- E. Amentered polyethyleum glycol

32. The following are Reasons for preserving tissue except

- A. Failure reference
- B. General demonstration
- C. Research
- D. Enable at people do other work
- E. Method of disposal

33. Tissue is preserved using the following except

- A. 10% formal suflurale to 30% glycerol
- B. 10-20% oiethys glycerol
- C. 10% phenocetol
- D. 10% formal saline the 70% alacohol
- E. Osmun teroxids

34. The following are essential of fixation except

- A. Should be emmedcele
- B. Required should not be exceeded
- C. Use correct fixative for correct teaching
- D. Some fixative requires through washing
- E. Avoid contact with containers

35. Gouding and has the following c except

- A. Formed and
- B. Distilled water
- C. Formal dehyde
- D. Hydrochloric acid

36. Recommanded fixative for prolation of embryo is

- A. Heidew
- B. Cermoy's fund
- C. Scnandise fluid
- D. Boniour fand
- E. Formal saline

37. Reasons for the fixation of pituitary glands is

- A. Leuker fibre
- B. ze
- C. hidden leas suse fluid
- D. carolyte fluid
- E. sehcerdins fand

38. the following are stages of decalcification except

- A. Tissue selection
- B. fixation
- C. Neutralization
- D. Through washing
- E. dehydratio

39. Decalcification is effected by use of the following except

- A. Drelating agents
- B. EDTA
- C. Minerals acids
- D. electroyshoresis
- E. X-rays

40. End point of decalcification can be determined by the following except

- A. Bending of tissue
- B. X-rays
- C. Pocking of tissue
- D. Chemical method
- E. Biological method

### SECTION B ANSWERS ALL QUESTIONS.

#### Question 1

- a) Differentiate mitosis from meiosis (6marks)
- b) Describe cell division (10marks)
- c) Define i) DNA (2marks)  
ii) chromosomes (2marks)

#### Question 2

- a) Define i) Gene (2marks)  
ii) Nitrogen (2marks)  
iii) Neiosis (2marks)  
iv) homologous (2marks)
- b) i) List 8 types of cytomorphosis (4marks)  
ii) List 8 cause of cytomorphosis (4marks)



- b) Define i) Necrobiosis  
ii) cytotviorphoisi

(2marks)

(2marks)

Question 3

- i) List 8 methods of examination in Histology  
(4marks)
- ii) List 8 criteria of a good fixative
- iii) List 6 effects of a fixative  
(3marks)