



TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Applied and Health Sciences

DEPARTMENT OF MEDICAL SCIENCES

DIPLOMA IN MEDICAL LABORATORY SCIENCES
(DMLS 12S)

AML 2240 : HISTOLOGY II

SPECIAL/SUPPLEMENTARY : EXAMINATIONS

SERIES: OCTOBER 2013

TIME: 2 HOURS

INSTRUCTIONS:

You should have the following for this examination

- *Answer booklet*

This paper consists of **TWO** sections.

Answer all questions in **Section A** and **B**. $\frac{1}{2}$ marks deducted for any wrong answer in **Section A**.

This paper consists of 9 PRINTED pages
SECTION A MCQ (40MARKS)

1. The following are constituents of Aparty's mounting media except
 - a) Gum Arabic
 - b) Cant sugar
 - c) Glycerol
 - d) Phymol
 - e) Distilled water

2. The following are exogenous pigments except
 - a) Calcium
 - b) Silver
 - c) Iron
 - d) Silca
 - e) Tattoo

3. The following are examples of accemtuators except
 - a) Acetric acid
 - b) Gitric acid
 - c) Phenol

4. In Delafield's and which haematoxylin Glycerol is a
 - a) Sharpener
 - b) Stabilizer
 - c) Presenative
 - d) Solvent

- e) Oxider
5. The following are Artificial dyes except
- a) Phloxine B
 - b) Eosin T
 - c) Rose Bengal
 - d) Saffron
 - e) Biebrich scarlet
6. The following are methods of chromaffin cell granules demonstration except
- a) Giemsa
 - b) Formal
 - c) Dehyde induced fluores
 - d) Masson Fontana Reaction
 - e) Ziel Nelsen
7. The following are types of resinous Mountants except
- a) Dammar balsam
 - b) Farnamts
 - c) Canada balsam
 - d) Euparal
 - e) Colophonium Resin
8. The following methods can be used for demonstration of stearyl pigment except.
- a) Gmelin's

- b) Fouchefs
 - c) Iodine
 - d) Formaldehyde induced fluorescence
 - e) Diazo Reagent
9. The following statements are true about asbestos rods except
- a) Has protein coat
 - b) Has iron coat
 - c) Has silica
 - d) Has crystalline fibres in beaded form
 - e) Has carbon coat
10. The following are ingredients of Eosin Aguresop except
- a) Bismark brown
 - b) 0.5% light green
 - c) Eosin Y
 - d) Phosphotungstic acid
 - e) Tetrazine
11. Absence of ribbons and sections crumbling could be due to the following causes except
- a) Wax too hard
 - b) Rate of eulting too slow
 - c) Soft paraffin wax
 - d) Knife till too great
 - e) Knife blunt

12. Silver pigments can be removed by

- a) Rubeamic acid
- b) HNO₃+ oxalic acid
- c) Potassium ferricyanide + sodium hyposulphate
- d) Ammonium sulphate
- e) Picric acid

13. The following are nuclear stains except

- a) Carmine
- b) Saffranin
- c) Neutral Red
- d) Methylene blue
- e) Rose Bengal

14. The following is a progressive staining technique

- a) Gram's stain
- b) Perl's Prussian blue
- c) Haematoxylin and Eosin
- d) Celestine blue
- e) Papamicro

15. The following are forms of paraffin wax except

- a) Biotin
- b) Tissue mat
- c) Paraplast plus

- d) Paraplast
- e) Diethylene glycol distearate

16. The following statement is true abouts chromotropes except

- a) Has a property of metachro masis
- b) Observed in Amyloid cartilage
- c) Exhibits metachromatic staining
- d) Stains is various shades of colors
- e) Arechromogents

17. The following are embedding moulds except

- a) Leukhart's
- b) Paper boats
- c) Glass tubing
- d) Watch glasses
- e) Pyrex glasses

18. Hydration means

- a) Use of alcohols
- b) Use of water
- c) Use of alcohols and water
- d) Ascending grades of alcohol then water
- e) Descending grades of alcohol then water

19. The following are not embedding media that do not use dehydrating and clearing agents except

- a) Paraffin wax
- b) Gelatin
- c) Gum Arabic
- d) Agar
- e) Water soluble waxes

20. The following is not a solvent of Sudan dye except.

- a) Trathyl alcohol
- b) Xylene
- c) Chloroform
- d) Cedar wood oils
- e) Castor oil

21. A rotary microtome has the following except

- a) A pawl
- b) A ratchet wheel
- c) Micrometer screw gauge
- d) Handle
- e) Chuck

22. The following are regressive staining Techniques except

- a) Ziehl nealsen
- b) Adefite
- c) Gram's stain
- d) Papamicolour
- e) Perl's Prussian blue

23. Method used for demonstration of spirochaeter is

- a) Hagefontana
- b) Haematoxylin and Eosin
- c) Orcein
- d) Orcein weigherts Resorcin
- e) Didehyde

24. The following methods can be used for demonstation of collagen fibres except

- a) Masson Prictirome
- b) Weighterts
- c) Celestine blue
- d) Aldehyde
- e) Yerhaefe

25. The following statements are trued about the limitations of vital staining except

- a) Nuclear Membrane not permeable
- b) Only fed cells demonstrated
- c) Demonstrated Retyiculo end othelial system cells
- d) High concentration all the cells
- e) Penetration of the dyes is difficult

26. Which of the following mounting media can be used for demonstration of leishmania donoxari bodies

- a) Euparal
- b) Dammar balsam

- c) Canada balsam
- d) colophenium resin
- e) Abies balsamea

27. The following are bleaching agents used for demonstration of melamin except

- a) Hydrogen peroxide
- b) Paracetic acid
- c) Performic acid
- d) Potassium permanganate
- e) Potassium dichromate

28. The following are types of alums used in Haematoxylin except

- a) Potassium Alum
- b) Silica alum
- c) Ammonium alum
- d) Iron alum
- e) Chromic alum

29. Oxidizer in phosphotungstic acid haematoxylin is

- a) Potassium permanganate
- b) Stong iodine
- c) Ferric chloride
- d) Sodium iodate
- e) Hydrogen peroxide

30. Cochineal dye is extracted from

- a) Lichens
 - b) Enocus stiva
 - c) Boctylopius acetic
 - d) Vegetables
 - e) Snails
31. 5-hydroxyplamine which reacts with formalin to form tetra-4-carboline (coloreless) that couples with diazo reagent to form a red color is used for demonotration of
- a) Enterno chromaffin cells
 - b) Cliromaffin cells
 - c) Melathin
 - d) Cysfudisin
 - e) Copper
32. The following are alum haematoxylin except
- a) Byes
 - b) Einersons
 - c) Gomoris gallocyanin
 - d) Erlichs
 - e) Heiden heins susa
33. Insolube oxide in potassium dichromate facts can be removed by
- a) 1% acid alcohol
 - b) Saturated alcoholic pieric acid
 - c) Luggos rodine
 - d) Water
 - e) Alcohol

34. The following can be used in preparation of of acidic Canada balsam
- a) Salicylic acid
 - b) Calcium carfonate
 - c) Dopamine
 - d) Histamine
 - e) Adrenaline
35. The following elements can be demonstrated by metallic impregnation techniques except
- a) Lipofuctisn
 - b) Argentaffin cells
 - c) Chromaffin cells
 - d) Fungi
 - e) Relialin
36. The following are application of frozen sections except
- a) Micro incineration
 - b) Auto-radiography
 - c) Histochemical procedures
 - d) Cutibody antigen techniques
 - e) Production of Ribbons
37. The following statements are true about sections for electron Hicroscopy except
- a) Require expory Resin
 - b) Makes use of polyster resine
 - c) Uses special knives made of glass or diamond requires acrylics
 - d) Uses tool edge microtome knife

38. The following are hones except

- a) Arkansa
- b) Fine carborandum
- c) Plate glass
- d) Belgium yellow
- e) Zinc paste

39. Van Gieson is used in the following staining techniques except

- a) Coles
- b) Verhoefs
- c) Celestine blue
- d) Heiden hain's susa
- e) Papaniolou

40. Microtome knife used with rocking microtome is

- a) Planoconcave
- b) Bicoucare
- c) Plane wedge
- d) Seui plano concave
- e) Tool edge

SECTION B ESSAY questions

1. (a) Describe the technique of pertiprussian blue staining **(6marks)**
- (b) Write short notes on care and maintenance of microstomes **(6marks)**
- (c) State the biological becomes of staining **(8marks)**
2. (a) Define
- (i) Repressive staining
- (ii) Non vital staining
- (iii) Celeoidinization
- (iv) Metallic Impregnation
- (b) Write short notes on vital staining **(4marks)**
- (c) Describe Haematogenous pigmenta **(8marks)**
3. (a) Describe
- i) 4 types of microtomes (main) **(6marks)**
- ii) 4 type of embedding moulds **(6marks)**
- (b) (i) List 4 lubmeants **(2marks)**
- (ii) List 4 Adhesives **(3marks)**
- (c) Describe symmetric mounting media **(4marks)**

