



**NAMIBIA UNIVERSITY  
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF HEALTH AND APPLIED SCIENCES**

**DEPARTMENT OF HEALTH SCIENCES**

<b>QUALIFICATION:</b> BACHELOR OF MEDICAL LABORATORY SCIENCES	
<b>QUALIFICATION CODE:</b> 08BMLS	<b>LEVEL:</b> 6
<b>COURSE CODE:</b> ANP 611S	<b>COURSE NAME:</b> ANATOMICAL PATHOLOGY 2A
<b>SESSION:</b> JULY 2019	<b>PAPER:</b> THEORY
<b>DURATION:</b> 3 HOURS	<b>MARKS:</b> 100

<b>SUPPLEMENTARY/ SECOND OPPORTUNITY EXAMINATION QUESTION PAPER</b>	
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<b>MODERATOR:</b>	Mrs. Elzabe van der Colf

**THIS QUESTION PAPER CONSISTS OF 3 PAGES (Including this front page)**

## SECTION A (30 MARKS)

### **QUESTION 1** **[14]**

- 1.1 Discuss the principle of embedding of tissue (4)
- 1.2 Explain the following terms:
- 1.2.1 Vital stain (2)
  - 1.2.2 Progressive staining (2)
  - 1.2.3 Regressive staining (2)
- 1.3. Differentiate between acidophilic and basophilic (4)

### **QUESTION 2** **[16]**

- 2.1. Define the following tissues processing terms used in anatomical pathology laboratory:
- 2.1.1 Dehydration (2)
  - 2.1.2 Clearing (2)
  - 2.1.3 Infiltration (2)
  - 2.1.4 Fixation (2)
  - 2.1.5 Grossing (2)
  - 2.1.6 Microtome (2)
- 2.2. Name four properties of good fixative. (4)

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## SECTION B (30 marks)

### **QUESTION 3** **[30]**

- 3.1. Provide the results of the following histology stains:
- 3.1.1 Masson Fontana (3)
  - 3.1.2 Gordon and sweets (3)
  - 3.1.3 Periodic acid Schiff's (2)
  - 3.1.4 Grocott's methamine silver (2)
  - 3.1.5 H&E (2)
- 3.2. Basement membrane are divided into three zones, provide names of the zones. (6)

3.3 Name and provide the principle of each stain used to demonstrate the following in the tissue:

- |                          |     |
|--------------------------|-----|
| 3.3.1 Glycogen           | (4) |
| 3.3.2 Hemosiderin        | (4) |
| 3.3.3 Acid fast bacilli. | (4) |

## SECTION C (40 MARKS)

### **QUESTION 4** **[20]**

Outline and discuss each stage of immunohistochemistry direct method.

### **QUESTION 5** **[20]**

5.1. Illustrate with the aid diagram the difference between direct and indirect antigen labelling. (10)

5.2 List ten (10) components of transmission electron microscopy. (10)