



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

Faculty of Health, Applied Sciences and Natural Resources

Department of Health Sciences

QUALIFICATION: BACHELOR OF MEDICAL LABORATORY SCIENCES	
QUALIFICATION CODE: 08BMLS	LEVEL: 6
COURSE: ANATOMICAL PATHOLOGY 2B	COURSE CODE: ANP621S
DATE: NOVEMBER 2022	SESSION: THEORY
DURATION: 3 HOURS	MARKS: 100

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
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MODERATOR:	Ms Ndeshipewa Hamatui - Valombola

INSTRUCTIONS
<ol style="list-style-type: none">1. Answer all questions.2. Please write neatly and legibly.3. Do not use the left side margin of the exam paper. This must be allowed for the examiner.4. No books, notes and other additional aids are allowed.5. Mark all answers clearly with their respective question numbers.

Permissible material

Non programmable calculator is allowed.

THIS EXAMINATION PAPER CONSISTS OF 6 PAGES (Excluding this front page)

Section A (10 marks)

Question 1

[10]

1. Evaluate the statements in each numbered section and select the most appropriate answer. Write “true” or “false” next to the corresponding number.
 - 1.1 Schwann and Schleiden published their cell theory in 1838.
 - a) True
 - b) False
 - 1.2 Cytology (also known as cytopathology) involves examining cells from bodily tissues or fluids to determine a diagnosis.
 - a) True
 - b) False
 - 1.3 The internal genitalia consists of the vagina, cervix, uterus, fallopian tubes, ovaries and the clitoris.
 - a) True
 - b) False
 - 1.4 The cervix is the neck of the uterus, the lower, narrow portion where it joins with the upper part of the vagina.
 - a) True
 - b) False
 - 1.5 Cytolysis only occurs in cells which have cell walls.
 - a) True
 - b) False
 - 1.6 Identification of abnormal epithelial cells is the first step in learning how to screen cervical samples.
 - a) True
 - b) False
 - 1.7 Benign tumors do not necessarily turn into malignant tumors.
 - a) True
 - b) False

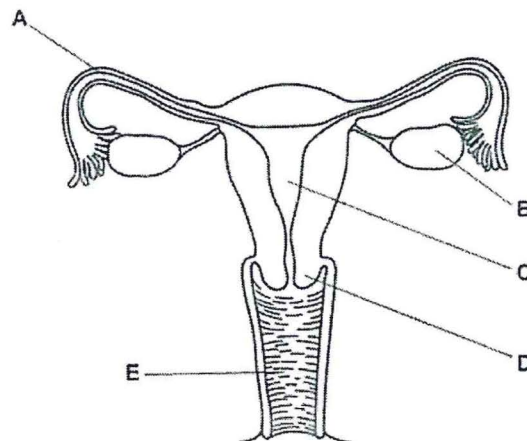
- 1.8 Adults are more likely than children to develop blastomas.
- a) True
b) False
- 1.9 Cell growth and cell division should always occur together.
- a) True
b) False
- 1.10 A common finding in cervicovaginal smears is reparative change as a result of a variety of processes that may involve the glandular, metaplastic, and squamous epithelium.
- a) True
b) False

Section B (37 marks)

Question 2

[15]

- 2.1 Study the diagram of the female reproductive system below and answer the questions. Write the correct answer next to the corresponding number and letter.



- 2.1.1 Recognize the parts labelled A – E. (5)
- 2.1.2 Relate the parts labelled A – E to its respective epithelial lining. (10)

Question 3

[22]

- 3.1 Correlations between cytology and histology have identified certain features as most useful for distinguishing normal and neoplastic cells. Demonstrate your understanding of the above statement by explaining what this entails. (10)
- 3.2 Using your answers obtained in question 3.1 as a guide, tabulate prominent characteristic cytological features of the following epithelial cells:
- 3.2.1 Superficial squamous cell (3)
 - 3.2.2 Intermediate squamous cell (3)
 - 3.2.3 Parabasal cells (3)
 - 3.2.4 Basal cells (3)

Section C (29 marks)

Question 4

[14]

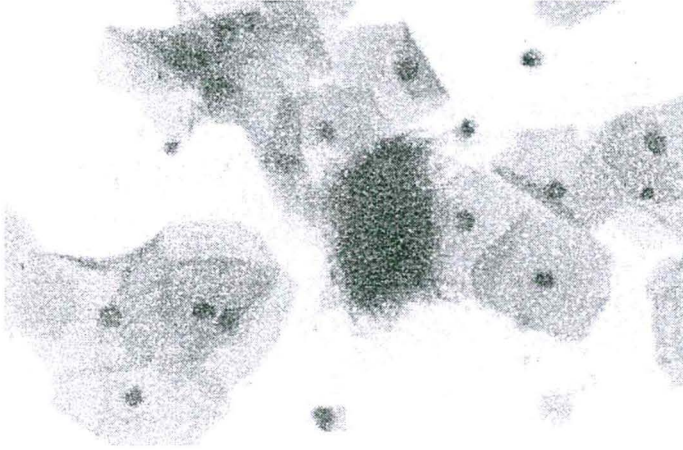
- 4.1 Discuss the distinct anatomical regions of the cervix and its cytological significance in detail. (10)
- 4.2 Apply your knowledge to justify the presence of lactobacilli in the vaginal canal from a cytological point of view. (4)

Question 5

[15]

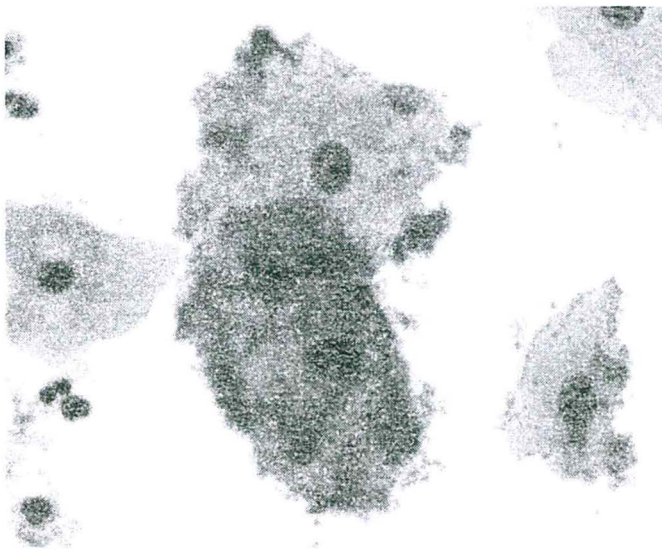
- 5.1 Study the following slides showing agents of infection seen in cervical samples. Identify the agents and substantiate your answer from a cytological perspective. Write your answer next to the corresponding number.

5.1.1



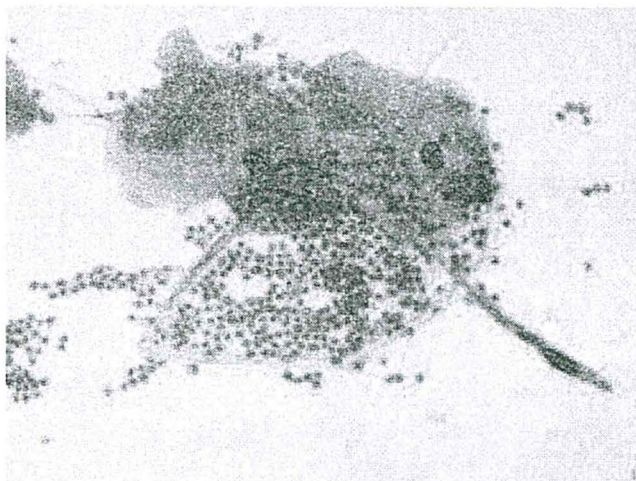
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5.1.2



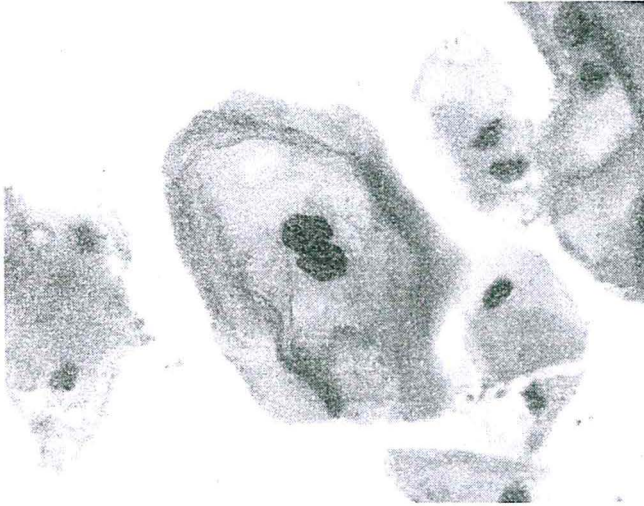
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5.1.3



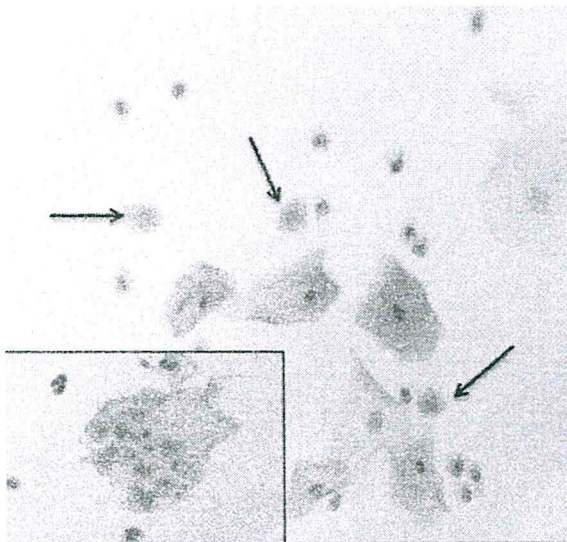
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5.1.4



(3)

5.1.5



(3)

Section D (24 marks)

Question 6

[8]

- 6.1 Describe the cause of the following artefacts and contaminants:
- 6.1.1 Fixation artefacts (1)
 - 6.1.2 Corn-flake artefacts (1)
- 6.2 Report the cytological pattern seen in women experiencing the following stages of menopause:
- 6.2.1 Early menopause (2)
 - 6.2.2 Post-menopause (2)
 - 6.2.3 Late post-menopause (2)

Question 7

[16]

- 7.1 Summarize the pathogenesis of cervical cancer. (10)
- 7.2 Sketch a scenario explaining how ovarian cancer metastasizes using appropriate terminology and how doctors can tell that it is cancer that has metastasized. (6)

Good luck!