



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

Faculty of Health and Applied Sciences

Department of Health Sciences

QUALIFICATION: BACHELOR OF MEDICAL LABORATORY SCIENCES	
QUALIFICATION CODE: 08BMLS	LEVEL: 6
COURSE: ANATOMICAL PATHOLOGY 2B	COURSE CODE: ANP621S
DATE: JANUARY 2020	SESSION:
DURATION: 3 HOURS	MARKS: 100

SUPPLEMENTARY/SECOND OPPORTUNITY EXAMINATION QUESTION PAPER	
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MODERATOR:	Dr Munyaradzi Mukesi

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 QUESTION PAPER CONSISTS OF 5 PAGES (Including this front page)

SECTION A (30 MARKS)

QUESTION 1

[15]

Evaluate the statements in each numbered section and select the most appropriate answer or phrase from the given possibilities. Write the appropriate letter next to the number of the statement/phrase.

- 1.1 What is the meaning of the word Cytology? (1)
- a. Research of different cells.
 - b. A specific stain used for staining of tissue cells.
 - c. The medical and scientific study of cells.
- 1.2 Palisaded strips are associated Pseudo-stratified columnar cells. (1)
- a. True
 - b. False
- 1.3 Each cell is a complex system consisting of many different building blocks enclosed in membrane bags. (1)
- a. True
 - b. False
- 1.4 The cell sizes may vary depending on: (1)
- a. The cell type and circumstances.
 - b. The host.
 - c. Volume of plasma in the body.
- 1.5 Procaryotes are: (1)
- a. Multicellular.
 - b. Multicellular with nucleus present.
 - c. Unicellular with nucleus absent.
- 1.6 Eukaryotic cells have a nucleus containing: (1)
- a. Eosinophilic matter.
 - b. All the cell's DNA.
 - c. All the minerals needed to form a cell.

- 1.7 The definition for Meiosis is: (1)
- a. Type of cell division that results in two daughter cells each having the same number and kind of chromosomes as the parent nucleus, typical of ordinary tissue growth.
 - b. The process of reproduction of gametes or sex cells containing one half of the chromosomes from each respective parent
 - c. The division of a cell into four daughter cells with different genetic material.
- 1.8 The following are parts of the female internal organs: (1)
- a. Femur, cervix, uterus
 - b. Fallopian tubes, gall bladder
 - c. Uterus, vagina, cervix, ovaries
- 1.9 Stratified squamous mucosa is found in: (1)
- a. Fallopian tubes, vagina
 - b. Vagina, cervix
 - c. Ovaries, fallopian tubes
- 1.10 The nuclear stain haematoxylin stains the nuclei red-black. (1)
- a. True
 - b. False
- 1.11 Progesterone causes: (1)
- a. Rapid desquamation of the upper layer of epithelium
 - b. Deposition of glycogen within the vaginal epithelium
 - c. Deposition of glycogen within the vaginal and gastric epithelium
- 1.12 Mucus of vaginal discharge is produced by: (1)
- a. Glands in the uterus
 - b. Glands of the cervix
 - c. Glands of the uterus and cervix

- 1.13 Only aircons and not extraction fans are sufficient for the cytology preparation room. (1)
- a. False
 - b. True
- 1.14 Process all cytology specimens in a laminar flow cabinet (1)
- a. False
 - b. True
- 1.15 Not every specimen received in the Cytology Laboratory is considered highly infectious (1)
- a. False
 - b. True

QUESTION 2

[20]

- 2.1 Briefly describe the following:
- 2.1.1 Nucleocytoplasmic ratio (1)
 - 2.1.2 Chromatin pattern (2)
 - 2.1.3 Pyknotic (1)
 - 2.1.4 Vesicular (1)
 - 2.1.5 Pleomorphism (1)
 - 2.1.6 Anisonucleosis (1)
 - 2.1.7 Navicular cells (1)
 - 2.1.8 Cytolysis (2)
- 2.2 Name the epithelial tissue which lines each of the following:
- 2.2.1 Stomach (1)
 - 2.2.2 Nasopharynx (1)
 - 2.2.3 Mouth (1)
 - 2.2.4 Heart (1)
 - 2.2.5 Urinary system (1)
 - 2.2.6 Fallopian ducts (1)

- 2.3 Which Sex hormone plays an important role in the maturation of stratified squamous epithelium of the female genital tract to:
- 2.3.1 Intermediate layer (1)
- 2.3.2 Superficial layer (1)
- 2.4 Indicate the Maturation Index pattern% for the following:
- 2.4.1 Child (1)
- 2.4.2 Pregnancy (1)

SECTION B (MARKS 25)

QUESTION 3 [25]

- 3.1 What are the main aspects of safety at Cytology Specimen reception (5)
- 3.2 Propose the characteristics of a suitable/good fixative? (10)
- 3.3 Write notes on Cytoplasmic stain of Papanicolaou Staining Technique. (10)

SECTION C (MARKS 15)

QUESTION 4 [15]

- 4.1 Write short notes on the Bench Centrifuge used in the preparation of cytology samples. (10)
- 4.2 Outline the principle of Cytology Fixation. (5)

SECTION D (MARKS 25)

QUESTION 5 [25]

- 5.1 What low-risk Human Papilloma Virus (HPV) types are associated with pre-cancerous lesions of the cervix (5)
- 5.2 Describe cytological findings for Human Papilloma Virus infection of the cervix. (10)
- 5.3 Describe diagnostic criteria of Non - Keratinizing Squamous Cell Carcinoma. (10)

End of examination