



UNIVERSITI KUALA LUMPUR  
INSTITUTE OF MEDICAL SCIENCE TECHNOLOGY

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FINAL EXAMINATION  
OCTOBER 2025 SEMESTER

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COURSE CODE : HDD30203  
COURSE TITLE : CYTOPATHOLOGY  
PROGRAMME NAME : DIPLOMA OF MEDICAL LABORATORY TECHNOLOGY  
DATE : 23 JANUARY 2026  
TIME : 3:00PM - 6:00PM  
DURATION : 3 HOURS



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INSTRUCTIONS TO CANDIDATES

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1. Please read the instructions given in the question paper CAREFULLY.
2. This question paper is printed on both sides of the paper.
3. This question paper consist of TWO sections.
4. Section A consist total of 60 marks. Answer ALL questions.
5. Section B consist of three questions. Answer TWO (2) questions only.
6. Please write your answer on the answer booklet provided.
7. Please answer all questions in English only.
8. Refer to the attached Formula/ Appendies.  *Tick if applicable*

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THERE ARE 5 PAGES OF QUESTIONS INCLUDING THIS PAGE

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**SECTION A (Total: 60 marks)**

**Answer ALL questions.**

**Please use the answer booklet provided.**

**Question 1**

Aided with drawings, describe the epithelium that lines the endocervix, ectocervix, small intestine, stomach and large bronchiole.

(10 marks)

**Question 2**

Aided with drawings, describe five (5) prominent cytological features of the high-grade squamous intraepithelial lesions (HSIL) of the cervix.

(10 marks)

**Question 3**

Explain about diaphane fixative and Carnoy's fixative used for fixation of cytological smears, in terms of its features, when and how it is used.

(10 marks)

**Question 4**

Explain about Shorr's staining technique in terms of its purpose, staining principles, procedural steps and staining results.

(10 marks)

**Question 5**

Describe the procedural steps to examine the cytology smear under a light microscope.

(10 marks)

**Question 6**

Explain the procedure to prepare the pleural effusion cytology smear according to the 2-slides pull method.

(10 marks)

**SECTION B (Total: 40 marks)**

Answer TWO (2) questions only.

Please use the answer booklet provided.

**Question 1**

Quality assurance in a cytopathology laboratory aims to maintain the accuracy, reliability, and overall quality of laboratory test results. Discuss the quality requirements applicable to the following areas in accordance with the Quality Management System (QMS).

- (i) Accommodation and environmental
- (ii) Laboratory equipment, reagents and consumables
- (iii) Internal quality control (IQC) activity
- (iv) External quality assurance (EQA) activity

(20 marks)

**Question 2**

The Papanicolaou stain, commonly known as the Pap stain, is a staining technique used in cytology to enhance the visualization of cells under a microscope. Developed by Dr. George Papanicolaou in the 1940s, it is primarily utilized in the detection of precancerous and cancerous cells.

- (a) Describe the advantages of the Pap stain for the detection of precancerous and cancerous cells.

(5 marks)

- (b) Discuss the key steps of the staining procedures and the staining results.

(15 marks)

**Question 3**

Fine needle aspiration cytology (FNAC) is performed on various solid tissues or masses to distinguish benign from malignant lesions and other abnormalities. Other than cytological smears, cell blocks are also prepared from the FNAC specimen.

- (a) Discuss about the preparation of smears from the FNAC specimen, including the number of slides, fixation methods, staining techniques, assessment of cellularity, and handling of excess material.

(10 marks)

- (b) Explain the purpose of cell block technique and describe the procedure to prepare the cell block according to the plasma-thrombin clot method.

(10 marks)

**END OF EXAMINATION PAPER**



