



**AFRICA  
UNIVERSITY**  
*A United Methodist-Related Institution*

*“Investing in Africa’s Future”*

**COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES  
DEPARTMENT OF BIOMEDICAL AND LABORATORY SCIENCES  
BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS DEGREE  
NSLS405: HISTOPATHOLOGY  
END OF SEMESTER FINAL EXAMINATIONS  
NOVEMBER 2025  
LECTURER: PROF MAIBOUGE SALISSOU  
DURATION: 3 HOURS**

**INSTRUCTIONS**

- 1. Write your candidate number on the space provided on top of each page**
- 2. Answer all questions in sections A on the question paper.**
- 3. Answer all questions in section B on separate answer sheets provided.**
- 4. Answer any 3 questions in section C on separate answer sheets provided**
- 5. The mark allocation for each question is indicated at the end of the question**
- 6. Credit will be given for logical, systematic and neat presentations in sections B and C**

**SECTION A [40 MARKS]**

**Instructions:** Answer true or false against each option listed A, B C, D in each question, each question carry 2 marks

**Question 1. The following are common site of hypertensive intra-cerebral hemorrhage**

- A. Basal ganglia. **True or False**
- B. Cerebellum. **True or False**
- C. Internal capsule. **True or False**
- D. Occipital poles. **True or False** **(2 marks)**

**Question 2. Bilaterality of following ovarian tumours is most common:**

- A. Benign serous tumours **True or False**
- B. Malignant serous tumours **True or False**
- C. Benign mucinous tumours **True or False**
- D. Brenner tumour **True or False** **(2 marks)**

**Question 3. The following are the commonest neoplastic cause of enlargement of lymph nodes**

- A. Chronic lymphatic leukaemia. **True or False**
- B. Diffuse non-Hodgkin's lymphoma. **True or False**
- C. Nodular sclerosing Hodgkin's disease. **True or False**
- D. Secondary carcinoma. **True or False**

**Question 4. The following are common site of a berry aneurysm**

- A. Basilar artery. **True or False**
- B. Bifurcation of the middle cerebral artery. **True or False**
- C. Junction of anterior communicating artery and anterior cerebral artery. **True or False**
- D. Junction of internal carotid artery and posterior communicating artery. **True or False**

**Question 5. Enzymatic digestion is the predominant event in the following type of necrosis:**

- A. Coagulative necrosis **True or False**
- B. Liquefactive necrosis **True or False**
- C. Caseous necrosis **True or False**
- D. Fat necrosis **True or False** **(2 marks)**

**Question 6. The following are feature of osteosarcoma**

- A. Fifty per cent of tumours occur around the knee. **True or False**

- B. Lung secondaries common. **True or False**
- C. May be associated with Paget's disease of bone. **True or False**
- D. Usually metastasize to lymph nodes. **True or False** (2 marks)

**Question 7. Liquid based cytology:**

- A. provides uniform monolayered cell dispersion **True or False**
- B. is useful only for gynaecological samples **True or False**
- C. is useful only for non-gynaecological samples **True or False**
- D. causes cellular clumping **True or False** (2 marks)

**Question 8. Abdominal fat aspiration is done for the diagnosis of:**

- A. Obesity **True or False**
- B. Amyloidosis **True or False**
- C. Metastatic cancer **True or False**
- D. Multiple myeloma **True or False** (2 marks)

**Question 9. Metastasis to the following tissues occur early in prostatic carcinoma:**

- A. Vertebrae **True or False**
- B. Obturator lymph node **True or False**
- C. Lungs **True or False**
- D. Brain **True or False** (2 marks)

**Question 10. In an undescended testis, the following tumour develops most often:**

- A. Seminoma **True or False**
- B. Teratoma **True or False**
- C. Choriocarcinoma **True or False**
- D. Yolk sac tumour **True or False** (2 marks)

**Question 11. Seminoma is a:**

- A. Benign tumour **True or False**
- B. Borderline tumour **True or False**
- C. Malignant tumour **True or False**
- D. Locally aggressive tumour **True or False** (2 marks)

**Question 12. AFP levels are elevated in 100% cases of following type of germ cell tumour:**

- A. Seminoma **True or False**
- B. Embryonal carcinoma **True or False**
- C. Yolk sac tumour **True or False**
- D. Choriocarcinoma **True or False** (2 marks)

**Question 13. Prostatic hyperplasia affects most often:**

- |                          |               |           |
|--------------------------|---------------|-----------|
| A. Peripheral prostate   | True or False |           |
| B. Periurethral prostate | True or False |           |
| C. Capsule of prostate   | True or False |           |
| D. Entire prostate       | True or False | (2 marks) |

**Question 14. The most thrombogenic constituent of atheroma is:**

- |                        |               |           |
|------------------------|---------------|-----------|
| A. Fibrous cap         | True or False |           |
| B. Lipid core          | True or False |           |
| C. Foam cells          | True or False |           |
| D. Smooth muscle cells | True or False | (2 marks) |

**Question 15. Tubercle bacilli in caseous lesions are best demonstrated in:**

- |  |               |           |
|--|---------------|-----------|
| A. Caseous centre                        | True or False |           |
| B. Margin of necrosis with viable tissue | True or False |           |
| C. Epithelioid cells                     | True or False |           |
| D. Langhans' giant cells                 | True or False | (2 marks) |

**Question 16. The most common cause of arterial thromboemboli is/are:**

- |                                   |               |           |
|-----------------------------------|---------------|-----------|
| A. Cardiac thrombi                | True or False |           |
| B. Aortic aneurysm                | True or False |           |
| C. Pulmonary veins                | True or False |           |
| D. Aortic atherosclerotic plaques | True or False | (2 marks) |

**Question 17. The following are characteristics of metaplasia:**

- |   |               |           |
|---|---------------|-----------|
| A. It is a disordered growth                    | True or False |           |
| B. It affects only epithelial tissues           | True or False |           |
| C. It is a reversible change                    | True or False |           |
| D. It is an irreversible and progressive change | True or False | (2 marks) |

**Question 18. The following are feature of rheumatoid arthritis**

- |  |               |           |
|--|---------------|-----------|
| A. Foreign body giant cell reaction to crystals. | True or False |           |
| B. Frondose, inflamed synovium.                  | True or False |           |
| C. Necrosis of subcutaneous collagen.            | True or False |           |
| D. Pannus formation.                             | True or False | (2 marks) |

**Question 19. The following are feature of cystic mastopathy**

- |   |               |  |
|---|---------------|--|
| A. Apocrine metaplasia of glandular epithelium. | True or False |  |
| B. Cyst formation.                              | True or False |  |
| C. Formation of new breast lobules.             | True or False |  |

D. Paget's disease of nipple. **True or False (2 marks)**

**Question 20. In atrophy, the cells are:**

- |                               |                      |                  |
|-------------------------------|----------------------|------------------|
| A. Dead cells                 | <b>True or False</b> |                  |
| B. Shrunken cells             | <b>True or False</b> |                  |
| C. Irreversibly injured cells | <b>True or False</b> |                  |
| D. Reversibly injured cells   | <b>True or False</b> | <b>(2 marks)</b> |

**SECTION B: [20 MARKS]**

**Instructions:** Answer all questions on separate answer sheets provided

**Write short note on the following**

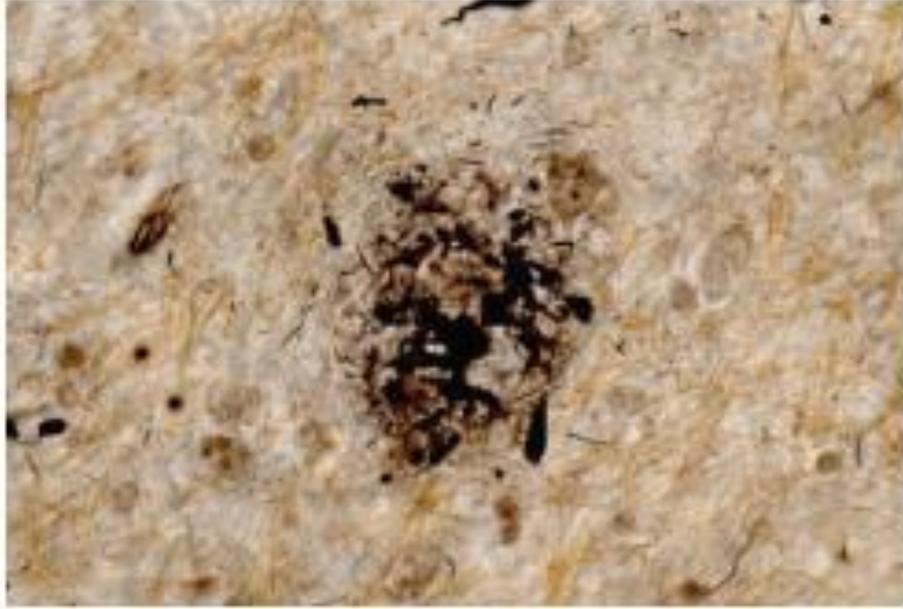
1. Endometriosis. **[5 marks]**
2. Atherosclerosis. **[5 marks]**
3. State the main laboratory findings associated with inflammatory conditions **[5 marks]**
4. Cryptorchidism. **[5 marks]**

**SECTION C: [75 marks]**

**Instructions:** Answer any 3 questions from this section on separate answer sheets provided

- 1) Discuss prostatic adenocarcinomas. **[25 marks]**
- 2) Discuss seminomas. **[25 marks]**
- 3) Epithelial ovarian **[25 marks]**
- 4) An 80-year-old woman wanders away from a nursing home and dies in a pedestrian-motor vehicle accident. A silver stained section of her brain at autopsy reveals numerous lesions in the cerebral cortex (figure1).  
**4a)** which of the following terms best describes these pathologic findings?
  - i. Granulovacuolar degeneration
  - ii. Lewy bodies
  - iii. Neuritic plaques
  - iv. Neurofibrillary tangles
  - v. Spongiform encephalopathy **(5 mark)****4b)** justify your answer including why others options were excluded **(10 marks)**

4c) Describe the pathophysiological process of the pathological condition you have chosen in the above options (10 mark)

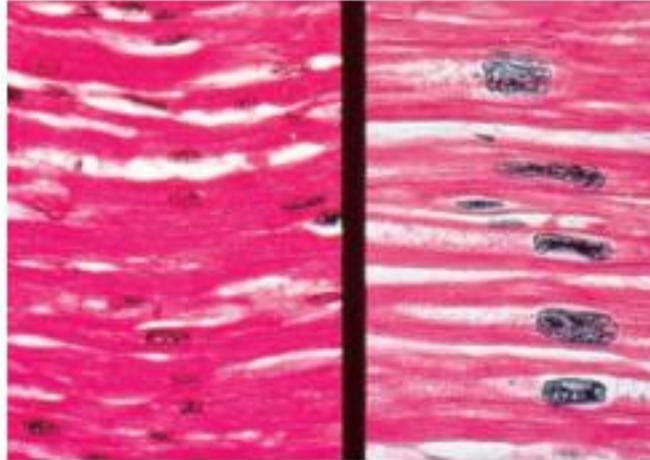


*Figure 1*

**Question 5)** A 68-year-old woman with metastatic breast cancer develops multiple organ dysfunction and expires. The heart at autopsy weighs 380 g (normal = 230 to 280 g in women). The patient's myocardium (right) is compared to normal myocardium (left) in figure 2

5a) these pathologic findings are mostly likely due to which of the following conditions? (5 mark)

- i. Amyloidosis
- ii. Chemotherapy
- iii. Hypertension
- iv. Inflammation
- v. Ischemia



**Figure 2**

**5b) Justify your answer including why others options were excluded (10 mark)**

**5c) Discuss the pathophysiology of the option you have choose above (10 marks)**

**END**

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