

Candidate number.....



AFRICA
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**COLLEGE OF HEALTH, AGRICULTURE & NATURAL
SCIENCES**

DEPARTMENT OF HEALTH SCIENCES

SLS 405 HISTOPATHOLOGY

END OF SECOND SEMESTER EXAMINATIONS

APRIL/MAY 2019

LECTURER: DR MACHALAGA

DURATION: 3 HOURS

INSTRUCTIONS

Write your candidate number on the space provided on top of each page

Answer **all** questions in section A on the question paper.

Answer any **2** questions in section B on separate answer sheets provided

Credit will be given for logical, systematic and neat presentations in sections B

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SECTION A

Answer all questions by indicating T for TRUE or F for FALSE in front of each of the statements (a) to (d) in all the questions

1. Retinoblastoma
 - A is also known as neuroblastoma
 - B Chromosomal aberration resides on chromosome 13
 - C shows as a white reflex of the eye clinically
 - D is a common cause of morbidity in Zimbabwe
 - E forms Flexner-Wintersteiner rosettes

2. Gallstones have the following associations
 - A. Female sex
 - B. Flatulence
 - C. Forty to fifty years age group
 - D. Obesity
 - E. Pregnancy

3. Multiple Myeloma
 - A is a a small round blue cell tumour
 - B occurs in children
 - C histologically has a starry sky appearance
 - D Bence Jones proteins are found in urine
 - E geographic distribution of the tumour follows that of malaria

4. Analgesic nephropathy
 - A results from abuse of painkillers
 - B grossly shows papillary necrosis
 - C histologically shows tubulointerstitial nephritis
 - D Non steroidal anti inflammatory drugs (NSAIDS) are thought to block prostaglandin production resulting in ischaemic damage
 - E may result in transitional cell carcinoma

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5. Ewings/PNET

- A. Is a small round blue cell tumour
- B. Commonly affects children
- C. Involves a genetic mutation t (3, 18)
- D. On Xray shows a destructive lesion of diaphysis close to joints
- E. Involvement of the chest wall is known as an Askitumour

6. The following are signs and symptoms of raised intracranial pressure

- A. vomiting
- B. headache
- C. lethargy which may progress to coma
- D. reduced vision which may progress to blindness
- E. reduced hearing which may progress to deafness

7. The following are small round blue cell tumours

- A renal cell carcinoma
- B neuroblastoma
- C nephroblastoma
- D basal cell carcinoma
- E Merkel cell carcinoma

8. Yellow fever

- A. Is caused by a virus- Aedesagypsi
- B. Is a haemorrhagic fever
- C. Case fatality rate is 20-60%
- D. Single dose of immunization confers lifelong protection
- E. Humans are an incidental host due to deforestation

9. Risk factors for squamous cell carcinoma of the skin include

- A multiple nevi
- B arsenic exposure
- C ultra violet radiation
- D chronic ulcers such as osteomyelitis fistulae
- E traumatic scars

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10. The following are pneumoconioses

- A bagassosis
- B asbestosis
- C angiomatoses
- D coal workers' lung
- E silicosis

11. The four main primary malignant tumours of the thyroid include

- A. Warthintumour
- B. Papillary cell carcinoma
- C. Squamous cell carcinoma
- D. Anaplastic carcinoma

12. Diabetes mellitus

- A. Physiologically sorbitol excess osmotically affects multiple systems
- B. Type II is commoner in the overweight
- C. Blindness is a complication
- D. Non healing wounds especially on the feet are a symptom
- E. Literally means sweet waters in reference to the outdated method of tasting urine to test for diabetes

13. Tumours of the pituitary

- A. May cause signs of raised intracranial pressure
- B. May cause blindness of peripheral vision
- C. Adenoma is the commonest primary tumour
- D. Tumour cells may be null cells ie hormonally silent
- E. Are a part of the MEN 1 (Wermer's syndrome)

14. When handling a bone marrow biopsy, the following techniques are used

- A Careful handling with non toothed forceps
- B Soaking in EDTA
- C Soaking in concentrated HCL acid
- D Soaking in 80% formic acid
- E CD4 and CD8 immunostaining

15. Concerning melanoma

- A. Is a benign tumour
- B. Occurs more commonly in dark skinned individuals on acral surfaces
- C. Is commoner in males
- D. Is commoner in females on the legs ((below skirt distribution)

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E. Mutations in BRAF genes are implicated

16. The following may be symptoms of breast carcinoma

- A. Skin puckering
- B. Haemorrhagic nipple discharge
- C. lump
- D. scaly skin rash
- E. peau d'orange skin changes

17. Neuroblastoma

- A. Is a small round blue cell tumour
- B. Occurs in the cortex of the adrenal
- C. Is common in children
- D. VMA is found in urine
- E. Blueberry muffin baby is a presenting sign

18. Oedema of the feet may be caused by

- A Renal failure
- B Cardiac failure
- C Liver disorder
- D Anaemia
- E Lymphatic obstruction

19. Thymoma

- A. Is a small round blue cell tumour
- B. Is a primary tumour of the thyroid
- C. Xrays show a mass expanding the mediastinum
- D. Has variants
- E. Is strongly associated with myasthenia gravis

20. Kaposi's sarcoma

- A. Is an intermediate vascular tumour
- B. Is caused by a human papilloma virus, HHV8
- C. Has an endemic subtype
- D. All cases are linked to HIV
- E. Immunohistochemistry may be used in its diagnosis

SECTION B [40 Marks]

Select two (2) questions from the four (4) questions to write. You are advised to spend approximately 30 minutes on each. Each question scores 20 marks each. Use of annotated diagrams is strongly encouraged.

1. The histopathology laboratory is a potentially hazardous environment. You are elected laboratory safety officer for the month. Outline your policies that would ensure your re-

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election using the following subheadings to identify potential sources in the laboratory, prevention of injury, first aid treatment and/or evacuation/ containment strategies in instances of prevention failure:

- Fire and explosion
- Biohazard
- Injury from sharps handling
- Chemical hazard
- Ergonomics and the risk of repetitive motion activities
- Electric shock/ electrocution hazard
- Bomb threat

2. Discuss the pathology of emboli

3. Outline the lifecycle of Schistosomiasis. Discuss aetiology, symptoms, clinical and laboratory tests in the context of this life cycle. Make reference to the appearance on a Haematoxylin and eosin stained tissue slide.

4. Select any one of the small round blue cell tumours and discuss its pathology. Include a discussion under the tumour's aetiology as to how genetics have contributed to its formation

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