

ANH
**Microorganism identification
and infectious diseases control**

T128

Monday, 14/11/2016

08:30 – 11:30

WORKFORCE DEVELOPMENT AUTHORITY



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**ADVANCED LEVEL NATIONAL EXAMINATIONS, 2016,
TECHNICAL AND PROFESSIONAL STUDIES**

EXAM TITLE:

**MICROORGANISM IDENTIFICATION AND INFECTIOUS
DISEASES CONTROL**

OPTION: ANIMAL HEALTH (ANH)

DURATION: 3 hours

INSTRUCTIONS

The paper is composed of **two (2) main Sections** as follows:

Section I: Attempt **any SIX (6)** out of TEN questions. **30 marks**

Section II: Attempt **any SEVEN (7)** out of TEN questions. **70 marks**

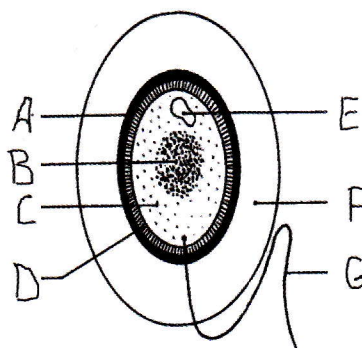
Note:

Every candidate is required to carefully comply with the above instructions. Penalty measures will be applied on their strict consideration.

Section I. Choose and answer any six (6) questions

30 marks

- 01.** Necropsy is one of the post-mortem examinations operated very soon after the death. What types of examinations it includes? Why is it done as soon as possible after the death? **5 marks**
- 02.** Give at least five (5) immunological distinct serotypes of FMD circulating to date. **5 marks**
- 03.** When analysing a blood sample under the microscope, you find a structure shown below. What should be this structure? Name its labeled parts A, B, C, D, E, F and G. **5 marks**



- 04.** Inflammation often occurs during an infectious disease. Explain the reasons for analysing an exudate in case of inflammation. Relate the content of an exudate. **5 marks**
- 05.** At necropsy, you find a liver with a striped appearance (colour bands), what should be your conclusion? What is the origin of these colour strips? **5 marks**
- 06.** You are now a technician in the domain of animal health. The case of foot rot disease appears in a given herd of cattle where you are the one to advise the eradication or prevention measures of that disease, how will you take care on its epidemiology? **5 marks**
- 07.** A farmer calls to perform a necropsy of his animal. After observation, you find out the signs of Pseudomelanosis. How can you explain technically the Pseudomelanosis? **5 marks**
- 08.** How do you distinguish “ischemia” from “infarction” during an examination of a sick animal (patient)? State the result/effect of ischemia in an affected area? **5 marks**
- 09.** Give the name of inflammation of the following organs: **5 marks**
a) Kidney b) bile duct c) tongue d) Liver e) Larynx
- 10.** Explain briefly the treatment of black quarter (blackleg) in case you are asked to intervene during its outbreak. **5 marks**

Section II. Choose and Answer any seven (7) questions

70 marks

11. One of the reasons to perform a necropsy is to find specific lesions of a disease. Discuss any five major criteria to describe macroscopically a lesion at necropsy. **10 marks**
12. The blood sample is needed in most cases of infectious diseases diagnosis. For which diagnostic purpose or laboratory tests the following types of blood samples are needed:
- Non-clotted blood (with anti-coagulant)
 - Clotted blood (without anti-coagulant)
 - Give the names of two anti-coagulants used in veterinary medicine
- 10 marks**
13. Anthrax is a contagious disease to animals and humans. During a thorough visual examination of the carcass, what shall you do when manipulating the carcass if that case of anthrax is suspected? **10 marks**
14. The three-day sickness also known as Bovine ephemeral fever is an arthropod-borne disease characterized by a high morbidity and a low mortality. Discuss your treatment plan in case you are called to rescue an animal affected by Bovine ephemeral fever. **10 marks**
15. The transmission risk factors for bovine mastitis are related to the animal, but also to the environmental and management factors. Give and discuss the methods you will use to achieve the prevention of mastitis in dairy cows. **10 marks**
16. Mr John is a Laboratory microbiologist working in a private Clinic. He was performing a laboratory diagnostic using a microscope. He found lots of bacteria but failed to identify them after staining. Help Mr John to differentiate the Gram-positive from the Gram-negative bacteria after gram staining. **10 marks**
17. Microbes are not only detrimental to human being, but can be beneficial in some circumstances. Give at least five circumstances in which microbes are beneficial for humans. **10 marks**
18. New castle disease is clinically indistinct from highly pathogenic avian influenza. However, there is a directive symptomatology observed. Discuss that symptomatology of New Castle disease in a poultry. **10 marks**

19. Explain the transmission ways of Anthrax in a given population of animals.

10 marks

20. Give the key signs to look for in contagious bovine pleuro-pneumonia (CBPP) clinical surveillance and its key indicators in Meat Inspection.

10 marks