



UNIVERSITY OF SWAZILAND
Faculty of Health Sciences

DIPLOMA IN ENVIRONMENTAL HEALTH
FINAL EXAMINATION PAPER 2005

TITLE OF PAPER : MEAT PATHOLOGY & SAFETY

COURSE CODE : EHS 201

DURATION : 3 HOURS

MARKS : 100

INSTRUCTIONS : ANSWER ALL FIVE(5) QUESTIONS

: NO PAPER SHOULD BE BROUGHT INTO NOR
OUT OF THE EXAMINATION ROOM.

: BEGIN EACH QUESTION ON A SEPARATE
SHEET OF PAPER.

**DO NOT OPEN THIS QUESTION PAPER UNTIL PERMISSION IS
GRANTED BY THE INVIGILATOR.**

Question 1

Multiple choice questions;

Choose the most appropriate answer;

1. Pelagic fish are middle and surface swimmers and have high fat in their muscles, which fish is not a pelagic in the list below.
 - A. Haddock
 - B. Herring
 - C. Mackerel
 - D. Sardine

2. Demersal fish are found swimming at or near the bottom of the sea and they have very little fat in the muscles, which fish is not a demersal in the list below?
 - A. Cod
 - B. Halibut
 - C. Tuna
 - D. Whiting

3. Which one of these parasitic worms do not reside in the cattle liver;
 - A. Fasciola hepatica
 - B. Dicrocoelium dendriticum
 - C. Paramphistomum cervi
 - D. Stilesia hepatica

4. Hyostrongylus rubidus resides in;
 - A. Stomach lining of cattle forming nodules and giving rise to gastritis.
 - B. Stomach lining of pigs, forming nodules and giving rise to severe gastritis.
 - C. Stomach lining of sheep and forming nodules.
 - D. Stomach lining of rabbits & hares, forming nodules

5. Which parasitic worm causes residual lesions or necrosis or fibrosis in the liver (milk spots) in cattle.
 - A. Ascaris species
 - B. Fasciola hepatica
 - C. Oesophagostomum radiatum
 - D. Trichinella spiralis

6. In sheep, muco-purulent nasal discharge is indicative of.
 - A. Mysisias
 - B. Warble flies(Hypoderma Lineatum)
 - C. Sheep maggot flies(Lucilia sericata)
 - D. Oestrus ovis

7. A sheep liver which has chronic fascioliasis is;
 - A. Haemorrhagic and covered with fibrin
 - B. Distorted and bile ducts are enlarged, thickened and bluish
 - C. Cirrhotic and bile ducts are thickened, dilated and may calcify
 - D. Swollen and congested

8. The liver in chronic fascioliasis in cattle is;
 - A. Haemorrhagic and covered with fibrin
 - B. Distorted and bile ducts are enlarged, thickened and bluish
 - C. Cirrhotic and bile ducts are thickened, dilated and may calcify
 - D. Swollen and congested

9. Human fascioliasis is due to;
 - A. Eating a liver infested with liver flukes
 - B. Eating uncooked green leafy salads or grass infested with liver flukes.
 - C. Eating uncooked green leafy salads infested with liver fluke cercaria or larvae.
 - D. Eating uncooked green leafy salads infested with liver fluke eggs

10. Which of these tapeworms may infest rabbits or hares;
 - A. *Taenia multiceps*
 - B. *Taenia hydatigena*
 - C. *Taenia saginata*
 - D. *Taenia pisiformis*

11. Which larval stage in *Diphylobothrium latum* is infective in human;
 - A. Coracidium larvae
 - B. Plerocercoid larvae
 - C. Proceroid larvae
 - D. Miracidium larvae

12. Coccidiosis in cattle is caused by;
 - A. *Coccidia bovis*
 - B. *Eimeria perforans*
 - C. *Eimeria scabra*
 - D. *Eimeria zurnii*

13. Coccidiosis in pigs is caused by;
 - A. *Coccidia porcine*
 - B. *Eimeria scabra*
 - C. *Eimeria perforans*
 - D. *Eimeria zurnii*

14. Which one of these diseases result in haemoglobinuria in cattle;
- A. Coccidiosis
 - B. Heart water
 - C. Red water fever
 - D. Toxoplasmosis
15. Which one of these statements is not correct;
- A. A goat affected by Heart water disease exhibit a rapid rise in temperature followed by laboured respiration and muscular tremor
 - B. A sheep affected by Heart water disease show a continual movement of the limbs, head, ears,, tongue and jaw
 - C. Heart water disease is caused by an intracellular parasite, *Cowdria ruminantium*
 - D. The parasite *Cowdria ruminantium* parasitize the red blood cells and set free haemoglobin content.
16. Which one of these statements is not correct about ixodidae ticks;
- A. Large numbers of eggs are laid all at one time after which the female dies.
 - B. Is more tolerant of dry conditions
 - C. Ticks stay feeding on host for a long time
 - D. Takes one large blood meal at each stage of the life cycle
17. Bacillary white diarrhea in poultry is caused by;
- A. *Salmonella typhimurium*
 - B. *Salmonella enteritidis*
 - C. *Salmonella gallinarum*
 - D. *Salmonella pullorum*
18. Fowl typhoid in poultry is caused by;
- A. *Salmonella typhimurium*
 - B. *Salmonella enteritidis*
 - C. *Salmonella gallinarum*
 - D. *Salmonella pullorum*
19. In cattle, a swollen jaw (lumpy jaw) indicates;
- A. Actinobacillosis
 - B. Actinomycosis
 - C. Liver flukes
 - D. Tetanus
20. In sheep, a swollen lower jaw indicates,
- A. Actinomycosis
 - B. Actinobacillosis
 - C. Liver flukes
 - D. Tetanus

[20 Marks]

Question 2

- a). With appropriate examples, explain five (5) objectives for meat inspection. [12]
- b). How would you assist in the control of tick-borne infections? [8]
- [20 Marks]

Question 3

- a). During cattle meat examination you find two cysts on the tongue of carcass 1, and you find two cysts, one in the diaphragm and another one in the masseter muscles on carcass 2. What will be your decision of the two carcasses? [6]
- b). During pig meat examination you find two cysts on the tongue of carcass 1, and you find two cysts, one in the diaphragm and another one in the masseter muscles on carcass 2. What will be your decision on the two carcasses? [2]
- c). What strategies would you employ in the control of tapeworms in human? [5]
- d). *Boophilus microplus* tick, is a 1-host vector of red water fever and it transmits diseases transovarially. Explain this statement. [3]
- e). How would you control human hydatid cysts? [4]
- [20 Marks]

Question 4

During ante-mortem examination, which signs would lead you to suspect the following diseases.

- a. Swine erysipelas [6]
- b. African swine fever [7]
- c. Newcastle disease [7]

[20 Marks]

Question 5

- a). What measures are required in the control of fish and shell fish food borne infections? [5]
- b). Differentiate the symptoms observed in Black quarter with those seen in Anthrax disease in cattle. [10]
- c). What lesions are associated with Fowl Typhoid in domestic fowl? [5]
- [20 Marks]