



UNIVERSITY OF SWAZILAND
Faculty of Health Sciences

DIPLOMA IN ENVIRONMENTAL HEALTH
FINAL EXAMINATION PAPER 2008

TITLE OF PAPER : MEAT PARASITOLOGY

COURSE CODE : EHS 208

DURATION : 2 HOURS

MARKS : 100

INSTRUCTIONS : ANSWER ONLY FOUR QUESTIONS

: QUESTION ONE IS COMPULSORY

: EACH QUESTION CARRIES 25 MARKS.

: WRITE NEATLY

: 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. Which one of these parasitic worms reside in the lung;
 - A. *Ascaris lumbricoides*
 - B. *Dictocaulus viviparus*
 - C. *Trichostrongylus axei*
 - D. *Bunostomum phlebotomum*
 - E. *Strongyloides papillosus*

2. Which one of these parasitic worms reside in the human intestines?
 - A. *Fasciola hepatica*
 - B. *Taenia solium*
 - C. *Diphyllobothrium latum*
 - D. Both B and C
 - E. *Echinococcus granulosus*

3. In human fasciolopsiasis, the intermediate host is;
 - A. *Fasciola hepatica*
 - B. *Limnaea* species
 - C. Planorbid species
 - D. *Fasciolopsis buski*
 - E. *Fasciola gigantica*

4. *Haemonchus contortus* in cattle resides in the;
 - A. rumen
 - B. reticulum
 - C. omasum
 - D. abomasum
 - E. both A and B

5. Which of these tapeworms resides in the intestines of ruminants mainly sheep?
 - A. *Thysaniezia giardia*
 - B. *Stilesia hepatica*
 - C. *Moniezia benedeni*
 - D. *Moniezia expansa*
 - E. *Taenia ovis*

6. Which of these tapeworms may infest rabbits or hares;
 - A. *Taenia multiceps*
 - B. *Taenia hydatigena*
 - C. *Taenia serialis*
 - D. *Taenia pisiformis*
 - E. Both C and D

7. Coccidiosis in sheep is caused by;
- A. *Coccidia ovis*
 - B. *Eimeria scabra*
 - C. *Eimeria perforans*
 - D. *Eimeria faurei*
 - E. *Eimeria zurnii*
8. Coccidiosis in rabbits is caused by;
- A. *Coccidia ovis*
 - B. *Eimeria scabra*
 - C. *Eimeria perforans*
 - D. *Eimeria faurei*
 - E. *Eimeria zurnii*
9. Toxoplasmosis is caused by;
- A. *Toxoplasma gondii*
 - B. *Eimeria scabra*
 - C. *Eimeria perforans*
 - D. *Eimeria stiedae*
 - E. *Eimeria zurnii*
10. 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.
 - E. *Boophilus microplus* tick is a 1-host vector of Red water fever.
11. In pigs, a nasal discharge may be indicative of;
- A. flue fever
 - B. parasitic bronchitis
 - C. Bot-fly breeding in the nostrils
 - D. *Swine fever*
 - E. Both B and C
12. In sheep, a swollen lower jaw may be indicative of;
- A. intestinal worms
 - B. liver flukes
 - C. actinomycosis
 - D. Both A and B
 - E. lumpy jaw

13. In pigs, chronic arthritis (swollen joints) indicates;
- A. Swine erysipelas
 - B. Swine fever
 - C. Pig paratyphoid
 - D. Swine flue
 - E. A, B and C
14. In pigs, de-coloration of the skin may be indicative of;
- A. Swine erysipelas
 - B. Swine fever
 - C. Pig paratyphoid
 - D. Swine flue
 - E. A, B and C
15. Which statement is **not true** in relation to Heart water diseases?
- A. Heart water diseases is also known as Black lung diseases
 - B. The incidence is common in Swaziland and is caused by *Cowdria ruminantium*
 - C. Heart water is transmitted by *Amblyomma hebraeum* or other ticks of this genus
 - D. The lymph nodes of the thorax, head and neck are oedematous and enlarged
 - E. It is a disease of cattle but may attack sheep and goats
16. Which statement is **not true** in relation to Anaplasmosis?
- A. Anaplasmosis is also known as gall-sickness
 - B. The disease is caused by *Anaplasma marginale* in cattle which is commonly transmitted by *Boophilus* spp. tick
 - C. The gallbladder is highly distended
 - D. The parasite attacks the red blood cells but does not destroy them, anemia and jaundice are main signs
 - E. It is a disease of sheep and goats but may also attack cattle
17. Coccidiosis post-mortem signs in the liver of rabbits are;
- A. irregular shaped whitish nodules of different sizes scattered unevenly on the surface of the liver
 - B. different sized nodules which appear in clusters or clumps and often calcareous
 - C. irregular shaped, uniform sized whitish nodules which are scattered evenly on the surface of the liver
 - D. regular shaped, uniform sized nodules which are scattered unevenly on the surface of the liver
 - E. different sized nodules which appear individual and often caseated

18. Cattle suffering from Red water fever will show the following disease symptoms;
- A. fever, anaemia, jaundice and haemoglobinurea
 - B. fever, anaemia, jaundice, and constipation
 - C. rapid rise in temperature followed by laboured respiration, anorexia and muscular tremor
 - D. nervous signs which include continual movement of limbs, head, ears, tongue, and jaw, circling movement and tonic convulsions with rigid neck
 - E. Both C and D
19. Cattle suffering from gall-sickness will show the following symptoms;
- A. fever, anaemia, jaundice and haemoglobinurea
 - B. fever, anaemia, jaundice, and constipation
 - C. rapid rise in temperature followed by laboured respiration, anorexia and muscular tremor
 - D. nervous signs which include continual movement of limbs, head, ears, tongue, and jaw, circling movement and tonic convulsions with rigid neck
 - E. Both C and D
20. The condition myiasis refers to;
- A. flies deposition of eggs or larvae on wounds of animals
 - B. flies deposition of eggs or larvae in the nostrils of sheep
 - C. flies deposition of eggs or larvae on the skin of food animals
 - D. large numbers of pimply guts on the intestines of food animals
 - E. large numbers of conical flukes in the stomach of ruminants
21. The larval stage of *Taenia hydatigena* is found hanging in the peritoneal cavity of;
- A. sheep
 - B. goats
 - C. cattle
 - D. pigs
 - E. sheep, goats, cattle, and pigs
22. The larval stage of *Taenia multiceps* occurs in the brain and spinal cord of;
- A. sheep
 - B. goats
 - C. cattle
 - D. man
 - E. sheep, goats, cattle, and man

23. *Taenia ovis* larval stage is found;
- A. hanging in the abdominal cavity of goats and sheep
 - B. in the muscles of the heart, diaphragmatic pleura and skeletal muscles, include muscles of the flanks and in the tongue, masseter muscles and oesophagus
 - C. in the intermuscular subcutaneous tissue of the back, the loin and hind limbs and muscles of the jaw
 - D. in the masseter and shoulder muscles, tongue and abdominal muscles
 - E. in the masseter, heart, tongue, diaphragm and intercostals muscles of sheep and goat
24. Which of these diseases is **not** a tickborne infection?
- A. Red water fever
 - B. Black lung disease
 - C. Coccidiosis disease
 - D. Gall-sickness disease
 - E. Both B and D
25. Which statement does not describe ixodidae ticks family?
- A. ticks stay feeding on host for long periods
 - B. more tolerant to dry conditions
 - C. sexes are easily distinguished in adults
 - D. large numbers of eggs are laid all at one time, after which the female dies.
 - E. Both A and D

[25 Marks]

Question 2

You have been sent to Mbabane City Council abattoir to perform meat inspection of cattle carcass. Explain the routine meat inspection procedures you would follow when inspecting cattle carcass and give at least one condition you are likely to find in each organ inspected.

[25]

[25 Marks]

Question 3

- a) How does coccidiosis infection spread from one animal to the other? [2]
- b) Explain the transmission of toxoplasmosis infection to human. [5]
- c) Give the most common predilection sites for cysticercus cellulose in pigs. [8]
- d) Discuss the control methods that may be adopted for hydatid cysts in human. [5]
- e) During the meat inspection, you find a small hydatid cyst in the lung, what will be your judgment and why? [5]

[25 Marks]

Question 4

Discuss the life cycle of *Trichinella spiralis* and show how man is entangled in the life cycle web, show the main symptoms and suggest control methods

[25 Marks]

Question 5

Tickborne infections have become an unstoppable menace in Swaziland and are threatening to wipe out the cattle herds and this problem hugely affects the meat industry. The present strategy of tickborne infection reduction is offering very little as a control. In your own assessment why the current methods of dipping are failing and what other options can you suggest to reduce the infection.

[25 Marks]