



UNIVERSITY OF SWAZILAND
Faculty of Health Sciences

DIPLOMA IN ENVIRONMENTAL HEALTH
FINAL EXAMINATION PAPER 2007

TITLE OF PAPER : MEAT PARASITOLOGY

COURSE CODE : EHS 208

DURATION : 2 HOURS

MARKS : 100

INSTRUCTIONS : ANSWER ANY 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 does not reside in the lung;
 - A. *Trichinella spiralis*
 - B. *Dictocaulus viviparus*
 - C. *Muellarius capillaris*
 - D. *Metastrongylus salmi*
 - E. *Protostrongylus refescens*

2. Which one of these parasitic worms does not reside in human intestines?
 - A. *Taenia saginata*
 - B. *Taenia solium*
 - C. *Diphylobothrium latum*
 - D. *Ascaris lumbricoides*
 - E. *Echinococcus granulosus*

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

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
 - E. Stomach lining of fowls and forming nodules

5. Which parasitic worm causes residual lesions or necrosis or fibrosis in the liver (milk spots)
 - A. *Ascaris suum*
 - B. *Fasciola hepatica*
 - C. *Fasciola gigantica*
 - D. *Dicrocoelium dendriticum*
 - E. *Onchocerca gutturosa*

6. Which of these tapeworms resides in the intestines of ruminants mainly cattle?
 - A. *Thysanosoma actinoides*
 - B. *Stilesia hepatica*
 - C. *Moniezia benedeni*
 - D. *Taenia saginata*
 - E. *Echinococcus granulosus*

7. A sheep liver which has chronic fascioliasis is;
- Haemorrhagic and covered with fibrin
 - Distorted and bile ducts are enlarged, thickened and bluish
 - Cirrhotic and bile ducts are thickened, dilated and may calcify
 - Swollen and congested
 - Pipy or fluky
8. The liver in chronic fascioliasis in cattle is;
- Haemorrhagic and covered with fibrin
 - Distorted and bile ducts are enlarged, thickened and bluish
 - Cirrhotic and bile ducts are thickened, dilated and may calcify
 - Swollen and congested
 - Pipey or fluky
9. Human fascioliasis is due to;
- Eating a liver infested with liver flukes
 - Eating uncooked green leafy salads or grass infested with liver flukes.
 - Eating uncooked green leafy salads infested with liver fluke cercaria or larvae.
 - Eating uncooked green leafy salads infested with liver fluke eggs
 - Eating a liver infested with cercaria or larvae.
10. Which of these tapeworms may infest rabbits or hares;
- Taenia multiceps*
 - Taenia hydatigena*
 - Taenia saginata*
 - Taenia pisiformis*
 - Taenia solium*
11. Which larval stage in *Diphylobothrium latum* is infective in human;
- Coracidium larvae
 - Plerocercoid larvae
 - Copepods larvae
 - Procercoid larvae
 - Cysticercus larvae
12. Coccidiosis in cattle is caused by;
- Coccidia bovis*
 - Eimeria scabra*
 - Eimeria perforans*
 - Eimeria stiedae*
 - Eimeria zurnii*

13. Coccidiosis in pigs is caused by;
- Coccidia porcine*
 - Eimeria scabra*
 - Eimeria perforans*
 - Eimeria stiedae*
 - Eimeria zurnii*
14. Toxoplasmosis is caused by;
- Toxoplasma gondii*
 - Eimeria scabra*
 - Eimeria perforans*
 - Eimeria stiedae*
 - Eimeria zurnii*
15. Which one of these diseases result in haemoglobinuria in cattle;
- Coccidiosis
 - Heart water
 - Babesiasis
 - Anaplasmosis
 - Toxoplasmosis
16. Which one of these statements is not correct;
- A goat affected by Heart water disease exhibit a rapid rise in temperature followed by laboured respiration and muscular tremor
 - A sheep affected by Heart water disease show a continual movement of the limbs, head, ears,, tongue and jaw
 - Heart water disease is caused by an intracellular parasite, *Cowdria ruminantium*
 - The parasite *Cowdria ruminantium* parasitize the red blood cells and set free haemoglobin content.
 - Boophilus microplus* tick is a 1-host vector of Red water fever.
17. Which one of these statements is not correct about ixodidae ticks;
- Takes small blood meal repeated number of times
 - Large numbers of eggs are laid all at one time after which the female dies
 - Such ticks are found in both tropics and temperate climates
 - Mainly attack cattle
 - Mouth parts projects forward and are visible from above.
18. Inco-ordination of movement in cattle is indicative of;
- pregnancy toxemia
 - Foot and mouth disease
 - mineral deficiency
 - T.b meningitis
 - Tetanus (lock- jaw)

19. Inco-ordination of movement in sheep is indicative of;
- A. pregnancy toxemia
 - B. Foot and mouth disease
 - C. mineral deficiency
 - D. T.b meningitis
 - E. Tetanus (lock- jaw)
20. A sheep infested with hydatid cysts have;
- A. 8% fertile cysts
 - B. 10% fertile cysts
 - C. 20% fertile cysts
 - D. 90% fertile cysts
 - E. 92% fertile cysts
21. Which parasite causes onchocerciasis in cattle with the formation of nodules in the brisket and renders the brisket unfit for human consumption?
- A. *Onchocerca linealis*
 - B. *Onchocerca gibsoni*
 - C. *Onchocerca reticulata*
 - D. *Onchocerca gutturosa*
 - E. *Onchocerca volvulus*
22. Conical flukes or *Paramphistomum cervi* in ruminants reside in;
- A. Omasum
 - B. Abomasum
 - C. Reticulum
 - D. Rumen
 - E. C and D
23. Blowflies include the following flies;
- A. Calliphora species, sometimes known as bluebottle flies
 - B. Lucilia species, sometimes known as greenbottle flies
 - C. Sarcophaga species, also known as meat flies
 - D. Chrysomyia species, also known as old-screw fly
 - E. All of the above
24. Which one of these statements is **not correct** about Heart water?
- A. It also known as Black lung and it mainly attacks sheep and goats
 - B. The main lesion is hydropericardium
 - C. It is caused by *Cowdria ruminantium*
 - D. It transmitted by *Amblyomma hebraeum* tick
 - E. None of the above is true

25. Which one of these statements is **not correct** about Anaplasmosis?
- The liver is enlarged, mottled, yellow, bronze or orange
 - The gallbladder is highly distended
 - It is caused by *Anaplasma marginale* and mainly attacks cattle
 - The kidney is enlarged, congested, soft and pulpy
 - All of the above

[25 Marks]

Question 2

- Why is meat inspection or examination before human consumption of health importance? [give appropriate examples] (10)
- What action would you take if you discover one cysticercus cyst in the masseter muscle? (5)
- Explain the following terms commonly used during meat judgments
 - Unconditionally passing
 - Conditionally passing
 - Local condemnation
 - Total condemnation

(10)

[25 Marks]

Question 3

- How would you differentiate Ixodidae from Argasidae ticks? (10)
- How would you control human tapeworms? (5)
- How do the following insects affects food animals?
 - ◆ Oestrus ovis (2)
 - ◆ Blowflies (2)
 - ◆ Malophagus ovinus (3)
 - ◆ Warble flies (3)

[25 Marks]

Question 4

- During your ante-mortem inspection, what symptoms or signs may lead you to suspect a case of Heart water disease? (6)
- Since both parasites causing red water fever and gall-sickness attack the red blood cells, how can you differentiate each disease? (10)
- How do human acquire Toxoplasmosis diseases? (2)
- Which organs of cattle carcase are likely to harbour cysticercus bovis cysts? (5)
- How do cattle acquire cysticercus bovis (2)

[25 Marks]

Question 5

Define the disease conditions and terms commonly used in meat inspection.

- a. necrosis (2)
- b. emaciation (5)
- c. cloudy swelling (3)
- d. emphysema (2)
- e. pneumonia (2)
- f. pleurisy (3)
- g. cirrhosis (2)
- h. peritonitis (1)
- i. angioma (1)
- j. jaundice (2)
- k. pericarditis (2)

[25 Marks]