



UNIVERSITY OF SWAZILAND
Faculty of Health Sciences

DIPLOMA IN ENVIRONMENTAL HEALTH
FINAL EXAMINATION PAPER 2011

TITLE OF PAPER : MEAT PARASITOLOGY

COURSE CODE : EHS 208

DURATION : 2HOURS

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 [Compulsory]

Multiple choice questions
Choose the most appropriate answer.

1. 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*
2. Which parasitic worm causes residual lesions or necrosis or fibrosis in the liver (milk spots)?
 - A. *Fasciola hepatica*
 - B. *Ascaris lumbricoides*
 - C. *Stilesia hepatica*
 - D. *Dicrocoelium dendriticum*
 - E. *Onchocerca gutturosa*
3. 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
 - E. Capsule of the liver is haemorrhagic and covered with fibrin
4. 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 (hepatitis)
 - E. Capsule of the liver is haemorrhagic and covered with fibrin
5. 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
 - E. Eating a liver infested with cercaria or larvae.

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

7. Which one of these statements is not correct in relation to Heart water disease;
 - A. Affected goats exhibit a rapid rise in temperature followed by laboured respiration and muscular tremor
 - B. Affected sheep 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 resulting in red urine
 - E. Young calves up 4 weeks and lambs up to one week are highly resistant.

8. Which one of these statements is true about argasidae ticks;
 - A. Takes small blood meal repeated a number of times
 - B. Large numbers of eggs are laid all at one time after which the female dies
 - C. Ticks stays feeding on the host for long periods
 - D. Mainly attack cattle
 - E. Mouth parts projects forward and are visible from above.

9. 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)

10. 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. Chrysomya species, also known as old-screw fly
 - E. All of the above

11. Which one of these statements is **not correct** about Anaplasmosis in cattle?
 - A. It is mainly a disease of cattle but may also attack sheep and goats.
 - B. The main lesion is the distension of the gall bladder
 - C. The vector of importance is Boophilus species
 - D. It is sometimes known as the Black lung disease
 - E. The protozoa will parasitize red blood cells but does not destroy, so there is no haemoglobinuria

12. Which one of these statements is **not correct** about Warble flies?
- A. Large, two winged insects with hairy body
 - B. The larvae feed by penetrating the skin of animals and suck blood.
 - C. The larvae may be found on the wall of the oesophagus and subcutaneous tissue of the back
 - D. The larvae penetrate the mouth down the pharynx and then pass to the stomach
 - E. During feeding, the larvae enlarge the wound and also develop a foul-smelling necrotic area.
13. Myiasis is a condition that is caused:
- A. When warbles flies bore through the hide in cattle
 - B. When larvae cause a lot of damage in their movement on the flesh
 - C. When larvae is deposited on a wound by blowflies
 - D. When hatched larvae penetrate the skin and wonder in the body
 - E. All of the statements are correct
14. Toxoplasmosis in humans is transmitted by;
- A. food contaminated by pigs excrement
 - B. food contaminated by domestic cats excrement
 - C. eating pork or mutton with tissue cysts of the protozoa
 - D. blood sucking ticks
 - E. B and C
15. Which statement is **not true** in relation to Toxoplasmosis?
- A. Transplacental infection is common
 - B. Children are particularly at risk of infection
 - C. Milk of infected animals may contain the protozoa
 - D. Lesions are seen on the liver surface as irregular shaped whitish spots
 - E. In sheep, there is metritis, placentitis, and necrotic lesions in many organs of the fetus
16. Which statement is **not true** in relation to Trichinellosis?
- A. Trichinellosis is transmitted to human by eating raw or undercooked beef infected with the larvae of *Trichinella spiralis*
 - B. The worms after mating in the small intestines, the female deposits eggs in the lymph space.
 - C. Immature worms, travel through the arteries, and are transported to muscles where they grow and coil up in a cyst.
 - D. If you eat raw or undercooked meats, particularly pork, bear, wild feline, fox, wolf, seal, etc, you are at risk of infection
 - E. Presence of the larvae in the cysts, cause degeneration of adjacent muscle tissue.

17. In sheep, a swollen lower jaw indicates
- A. Actinomycosis
 - B. Lumpy jaw
 - C. Chronic arthritis
 - D. Swine erysipelas
 - E. Intestinal worms
18. In pigs, a swollen joints indicates
- A. Actinomycosis
 - B. Liver flukes
 - C. Chronic arthritis
 - D. Swine erysipelas
 - E. Intestinal worms
19. In pigs, nasal discharge may indicate
- A. Swine fever
 - B. Parasitic bronchitis
 - C. Bot-fly breeding in the nostrils
 - D. Pig paratyphoid
 - E. Swine erysipelas
20. Nodular intestinal worm disease in sheep, is caused by;
- A. *Oesophagostomum venulosum*
 - B. *Oesophagostomum radiatum*
 - C. *Oesophagostomum dentatum*
 - D. *Oesophagostomum columbianum*
 - E. *Oesophagostomum ovis*
21. Which one of the statements is **not true** in relation to *Fasciola hepatica*
- A. Adult fluke is hermaphrodite
 - B. Miracidium develops whilst the egg is lying on the ground
 - C. The cercariae may either float on water surface or attach on grass blade
 - D. Human acquire the infection through the consumption of undercooked fish
 - E. The occurrence of liver fluke disease is connected with the life history of snails such *Limnaea truncatula*
22. *Haemonchus contortus* in cattle resides in the;
- A. rumen
 - B. reticulum
 - C. omasum
 - D. abomasum
 - E. both A and B

23. Coccidiosis post-mortem signs in the liver of rabbits are;
- irregular shaped whitish nodules of different sizes scattered unevenly on the surface of the liver
 - different sized nodules which appear in clusters or clumps and often calcareous
 - irregular shaped, uniform sized whitish nodules which are scattered evenly on the surface of the liver
 - regular shaped, uniform sized nodules which are scattered unevenly on the surface of the liver
 - different sized nodules which appear individual and often caseated
24. The condition myiasis refers to;
- flies deposition of eggs or larvae on wounds of animals
 - flies deposition of eggs or larvae in the nostrils of sheep
 - flies deposition of eggs or larvae on the skin of food animals
 - large numbers of pimply guts on the intestines of food animals
 - large numbers of conical flukes in the stomach of ruminants
25. Which statement does not describe ixodidae ticks family?
- ticks stay feeding on host for long periods
 - more tolerant to dry conditions
 - sexes are easily distinguished in adults
 - large numbers of eggs are laid all at one time, after which the female dies.
 - Both A and D

[25 Marks]

Question 2

Discuss the routine meat inspection procedures in cattle that are performed Swaziland.

[25]

[25 Marks]

Question 3

- What action would you take if you discover one cysticercus cyst in the masseter muscle of pigs and cattle? [6]
- Meat inspection has failed to eliminate zoonotic diseases in Swaziland. Why is that so? [15]
- List four diseases that are zoonotic. [4]

[25 Marks]

Question 4

- a. During ante-mortem inspection, what symptoms or signs may lead you to suspect a case of Heart water disease? [6]
 - b. Explain, how do humans acquire Toxoplasmosis diseases? [4]
 - c. Which organs of pig's carcase are likely to harbour cysticercus cellulosae cysts? [5]
 - d. Using appropriate examples discuss the effects of parasites in animal host. [10]
- [25 Marks]**

Question 5

- a) Explain the life cycle of 'beef tapeworm' (10)
 - b) How would you control the transmission of hydatid cysts in humans? (5)
 - d) Discuss the methods that can be adopted for the control of Trichinellosis disease. (5)
 - e) How does a person acquire fascioliasis disease? [5]
- [25 Marks]**