Fall 2017

Version A | Lecture Exam #1 | Flowers

Name:_____

VMP 930 -- Lecture Exam #1
(100 points total)

Protozoa (67 points)

Matching (1 point each)

Matching I

Trypanosoma cruzi and *Leishmania infantum* are 2 uncommon, "imported" hemoflagellates that can cause systemic pathology in dogs. Match each of these hemoflagellates with the appropriate association. (1 point each)

_____ 1. Mediterranean

_____ 2. Cardiac Disease

_____ 3. Foxhounds

_____ 4. Stercorarian transmission

_____ 5. Sandflies

A. *Trypanosoma cruzi*

B. *Leishmania infantum*

Matching II

Eimeria bovis and *Cryptosporidium parvum* cause diarrhea in cattle. Match each of these intestinal apicomplexans with the appropriate association. (1 point each)

_____ 1. Infects microvilli of epithelial cells

_____ 2. High Host specificity

_____ 3. Dehydration

_____ 4. Watery diarrhea @ 7-14 days

_____ 5. Destruction of epithelial cells and gut lining

A. *Eimeria bovis*

B. *Cryptosporidium parvum*

C. Both

Matching III

Tritrichomonas foetus **and** ***Giardia sp. can*** **diarrhea in cats. Match each of these Mucoflagellates with the appropriate association. (1 point each)**

_____	1. Infective cyst	A. *Tritrichomonas foetus* feline
_____	2. Rodinazole	B. *Giardia sp.* Assemb. F
_____	3. Small Intestine	C. Both
_____	4. Cat remains bright and alert	
_____	5. Persistent smelly diarrhea	

Matching IV

Eimeria spp. and Cystoisospora **spp. are coccidians that cause diarrhea in domestic animals. Match each of these coccidians with the appropriate association. (1 point each)**

_____	1. Four sporocysts	A. *Eimeria spp*
_____	2. Ingest infective oocyst	B. *Cystoisospora spp.*
_____	3. Kitten	C. Both
_____	4. Ingest infected paratenic host	
_____	5. Very High Host Specificity	

Matching V

***Tritrichomonas foetus* bovine *and Neospora caninum* are protozoan that cause abortions in cattle. Match each of these protozoa with the appropriate association. (1 point each)**

_____ 1. Late term abortions

_____ 2. Prepuce washings

_____ 3. Apicomplexan

_____ 4. Sanitary artificial insemination

_____ 5. Ingest oocysts from canid feces

A. *Tritichomonas foetus* bovine

B. *Neospora caninum*

Multiple Choice (2 points each)

1. The systemic / abortion apicomplexan, _____, can be transmitted from female dog to puppies via transplacental transmission and often causes Flaccid Hind-limb Syndrome in puppies. [Circle the correct answer] (2 points)

   A. *Sarcocystis neurona*
   B. *Toxoplasma gondii*
   C. *Cystoisospora canis*
   D. *Neospora caninum*
   E. *Sarcocystis cruzi*

2. Because Imidocarb is used for the treatment *Babesia canis*, while a combo of Atovaquone & Azithromycin is used for *Babesia gibsoni*; it is best to distinguish between an infection of *Babesia canis* and *Babesia gibsoni*. Which is the best, most reliable test to determine between the *Babesia* species? [Circle the correct answer] (2 points)

   A. PCR
   B. Serology
   C. Fecal Centrifugation
   D. Blood Smear
   E. CBC & Chemistry Panel

3. _____ is a systemic apicomplexan that can accidentally infect a horse, causing neural pathology; with disease manifestations including ataxia and muscle atrophy. [Circle the correct answer] (2 points)

A. *Sarcocystis neurona*
B. *Toxoplasma gondii*
C. *Spirometra mansonoides*
D. *Neospora caninum*
E. *Sarcocystis cruzi*

4. *Cystoisospora suis* is the most important coccidian of piglets; causing scours, dehydration, and weight loss. Within the "piglet herd", this coccidian manifests _____ . [Circle the correct answer] (2 points)

A. High Morbidity and Low Mortality
B. High Mortality and Low Morbidity

5. _____ is a systemic apicomplexan that can accidentally infect a horse, causing neural pathology; with disease manifestations including ataxia and muscle atrophy. [Circle the correct answer] (2 points)

A. *Sarcocystis neurona*
B. *Toxoplasma gondii*
C. *Eimeria zuernii*
D. *Neospora caninum*
E. *Sarcocystis cruzi*

6. Which feline protozoan causes a disease that is seasonal (spring & summer), with clinical signs of febrile disease, dyspnea, jaundice, and lab diagnostics showing pancyotpenia, hyperbilirubinemia and schizont-laden macrophages on blood smear? [Circle the correct answer] (2 points)

A. *Toxoplasma gondii*
B. *Cytauxzoon felis*
C. *Babesia gibsoni*
D. *Cystoisospora rivolta*
E. *Tritrichomonas foetus* feline

7. Which 2 apicomplexans are of sereious zoonotic concern, especially for immonocompromised people? [Circle the correct answer] (2 points)

   A. *Sarcocystis neurona & Sarcocystis cruzi*
   B. *Eimeria zuernii & Cystoisospora revolta*
   C. *Neospora caninum & Tritichomonas foetus*
   D. *Cystoisospora ohioensis & Babesia gibsoni*
   E. *Toxoplasma gondii & Cryptosporidium parvum*

8. Which protozoan parasite shows high host specificity for its feline definitive host; but very low host specificity for paratenic host, allowing it to infect any warm blooded animal? [Circle the correct answer] (2 points)

   A. *Toxoplasma gondii*
   B. *Eimeria tenella*
   C. *Cystoisospora felis*
   D. *Neospora caninum*
   E. *Sarcocystis cruzi*

9. *Toxoplasma gondii* is a serious zoonotic disease for pregnant women, with the potential for causing fetal defects. Which of the following presents the greatest risk for congenital toxoplasmosis in the human fetus? [Circle the correct answer] (2 points)

   A. A mother, whose primary infection occurs early in pregnancy.
   B. A mother who is seropositive before pregnancy.
   C. An old indoor cat.

10. What is the prognosis for an untreated cat infected with *Cytauxzoon felis* ? [Circle the correct answer] (2 points)

    A. Acute but mild febrile illness, recovery within 5 days.

    B. Chronic disease that may cause cardiac failure years after infection.

    C. Acute febrile disease, with death 5 days after clinical signs.

11. Which tick-borne canine parasite should you consider if presented with an American Pit Bull Terrier with lethargy, pale mucous membranes, fever, lymphadenomegaly? [Circle the correct answer] (2 points)

    A. *Babesia gibsoni*

    B. *Leishmania infantum*

    C. *Cytauxzoon felis*

    D. *Neospora canimun*

    E. *Babesia canis*

Fill-in-the-Blank (2 points each)

1. Due to being highly toxic to these animals, Ionophore Coccidostats, such as Monensin and Lasalocid, should be strictly kept away from _____ . (2 points)

2. The primary supportive therapy for calves with scours caused by *Cryptosporidium parvum* or the coccidian, *Eimeria bovis* is _____. (2 points)

Lists (2 points each)

List I

1. Coccidiosis in production animals, like cattle, can cause severe diarrhea, list 4 management tactics required for the control of coccidiosis. (2 points each)

1. _____

2. _____

3. _____

4. _____

List II

1. *Toxoplasma gondii* is a serious zoonotic disease for pregnant women, with the potential for causing fetal defects. List 4 important things to advise a pregnant female to do if she is concerned about becoming infected with *Toxoplasma gondii*. (2 points each)

1. _____

2. _____

3. _____

4. _____

Trematodes & Cestodes (33 points total)

Multiple Choice I (2 points each)

1. The effects of the pathology caused by *Dicrocoelium dendriticum* infections are seen in _____. [Circle the correct answer] (2 points)

   A. lambs
   B. older sheep

2. The small intestinal fluke _____, can be a carrier of the bacterium *Neorickettsia helminthoeca*, which in turn can cause a severe disease called "Salmon Poisoning" in canids. [Circle the correct answer] (2 points)

   A. *Paragonimus kellicotti*
   B. *Platynosomum fastosum*
   C. *Nanophyetus salmincola*
   D. *Heterobilharzia americana*
   E. *Spirometra sp.*

3. Control measures for *Fasciola hepatica* may include: [Circle the correct answer] (2 points)

   A. Elimination of ants and terrestrial snails
   B. Elimination of aquatic snails and wet areas in the pasture
   C. Prevent human defecation in pastures & human ingestion of raw meat
   D. Prevent access of canids into the pasture and prevent canid access to offal

4. This blood fluke is generally found in the mesenteric vessels of raccoons and other wildlife, but can also infect dogs causing a severe disease, characterized by diarrhea, anorexia, weight loss and eventual death. [Circle the correct answer] (2 points)

   A. *Heterobilharzia americana*
   B. *Nanophyetus salmincola*
   C. *Dicrocoelium dendriticum*
   D. *Paragonimus kellicotti*
   E. *Platynosomum fastosum*

5. Which one of the following groups do ALL the flatworms (flukes and/or tapeworms) listed result in economic loss to a cattle farmer because of condemnation of cattle meat and/or liver? [Circle the correct answer] (2 points)

A. ***Echinococcus granulosus, Moniezia sp., Taenia pisiformis***

B. ***Fasciola hepatica, Taenia saginata, Fascioloides magna***

C. ***Moniezia sp., Dipylidium caninum, Fascioloides magna***

D. ***Taenia solium, Taenia taeniaformis, Taenia pisiformis***

E. ***Dicrocoelium dendriticum, Taenia pisiformis, Spirometra sp.***

6. Which one of the following canine tapeworms does NOT shed its proglottids in the host's feces? The lack of segments in the feces requires the veterinarian to utilize fecal sedimentation to diagnose this tapeworm infection. [Circle the correct answer] (2 points)

A. ***Taenia pisiformis***

B. ***Mesocestoides corti***

C. ***Dipylidium caninum***

D. ***Taenia taeniaeformis***

E. ***Spirometra sp.***

True / False

1. ***Anoplocephala perfoliata*** **is very easily and often diagnosed using the simple, passive fecal floatation technique. Circle the correct answer. (2 points)**

A. True **B. False**

Matching (1 point each)

Matching I

Many digenetic trematodes utilize a second intermediate host or an environmental substrate to infect the definitive host. Knowledge of these 2nd intermediate hosts assists the veterinarian in planning means for controlling fluke infections. Match each listed fluke with the appropriate 2nd intermediate host or environmental substrate with which the fluke utilizes. (1 point each)

_____ 1. *Fasciola hepatica*	A. Ants
_____ 2. *Nanophyetus salmincola*	B. Fish
_____ 3. *Dicrocoelium dendriticum*	C. Aquatic Vegetation
_____ 4. *Heterobilharzia americana*	D. Toad or Anolis
_____ 5. *Playtnosum fastosum*	E. This fluke does not use a 2nd intermediate host

Matching II

All tapeworms utilize at least one intermediate host to infect the definitive host. Knowledge of these intermediate hosts assists the veterinarian in planning means for controlling tapeworm infections. Match each listed tapeworm with the appropriate intermediate host with which the tapeworm utilizes. (1 point each)

_____ 1. *Dipylidium caninum*	A. Rabbit
_____ 2. *Moniezia sp.*	B. Rodent
_____ 3. *Taenia pisiformis*	C. Pasture Mite
_____ 4. *Taenia taeniaformis*	D. Flea

Matching III

Compare & Contrast the two helminth parasites of dogs & cats: *Spirometra sp.* and *Paragonimus kellicotti*. Some characteristics of the worms are shared, while other characteristics differ between the worms. (In front of the characteristic listed in the left-hand column, write the correct Letter that represents *Spirometra sp.*, *Paragonimus kellicotti* or Both, which are listed in the right-hand column.) (1 point each).

_____ 1. Lungs

_____ 2. Sedimentation

_____ 3. Cestode

_____ 4. Crayfish

_____ 5. Intermittent diarrhea

A. *Paragonimus kellicotti*

B. *Spirometra sp.*

C. Both

Matching IV

Humans can become infected with both adult tapeworms & important larval tapeworms. Match the tapeworm / stage with the mode of infection in which a human may acquire the tapeworm / stage. (1 point each)

_____ 1. *Echinococcus sp.* hydatid cyst

_____ 2. *Taenia solium* larvae

_____ 3. *Taenia saginata* adult tapeworm

_____ 4. *Spirometra sp.* larvae

_____ 5. *Taenia solium* adult tapeworm

A. Ingest larval tapeworm from raw pork

B. Ingest tapeworm egg from dog feces

C. Ingest tapeworm egg from human feces

D. Ingest larval tapeworm from raw beef

E. Ingest larval tapeworm in copepod