

Chittagong Veterinary and Animal Sciences University

Department of Pathology and Parasitology

Final Examination of Masters of Science in Parasitology

Course title: Vector Biology and Tropical Diseases (Theory)

Course code: VTD-601

Semester: January-June, 2023

Time: 2 Hours

Mark: 40

Answer any **FOUR** questions from the following. All questions bear equal marks:-

1. a. Define vector and vector biology? List different types of vectors with example.
b. How do you define Neglected tropical diseases (NTD)? List different Neglected tropical diseases (NTD) reported in Bangladesh. How will you control them?
2. a. Name four vector-borne tropical diseases with their causative agents, hosts and vectors.
b. Write down the significance of tropical disease research in veterinary science?
3. a. What is 'One Health' concept? How human behavior influences the epidemiology of parasitic zoonoses?
b. Illustrate how one health movement is related to vector-borne illness and their prevention?
4. a. How can you contribute to Dengue outbreak control as a veterinarian?
b. Mention the chemical, physical and biological method of controlling vectors?
5. a. Differentiate Tabanidae, Stomoxiinae and Glossinidae based on their morphology.
b. Describe the vector importance of (i) Sand Flies (ii) Biting Midges (iii) Horse Flies
6. Write short notes on (Any TWO):-
 - a. Leishmaniasis in dog
 - b. Vector potential of *Aedes sp.*
 - c. Blood sucking flies and parasitic zoonoses
 - d. Tick-borne illness in cattle and human

GOOD LUCK

Chittagong Veterinary and Animal Sciences University
Department of Pathology and Parasitology
MS in Parasitology
January - June Semester Final examination-2023
Course title - General Parasitology
Course code – GPR - 601
Full Marks - 40, Time - 2 hours

Answer any **FOUR** questions in the following:

1. a) Explain briefly the sources and mode of transmission of parasitic infection. 3.0
b) Illustrate the symbiosis and commensulism of animal association. 4.0
c) Define the following terms 0.5X6=3.0
i) Obligatory parasites ii) Coelozoic parasites iii) Hyperparasites
iv) Proliferous parasites v) Reservoir host vi) Aberrant parasites
2. a) What is helminthes? Describe various developmental stages of a digenetic trematode. 5.0
b) Differentiate between the follov/ings (any two) 2.5X2=5.0
i) Transport and paratenic host ii) Trematode and cestode iii) Inverse age resistance
and Pre-immunity
3. a) Illustrate the injurious effects of parasites on their hosts. 5.0
b) Describe the investigation procedure for the identification of gastrointestinal
parasitic problems in a herd. 5.0
4. a) What kinds of measures should be taken to prevent anthelmintics resistance in animals 5.0
b) Explain briefly the zoological nomenclature of parasites. 5.0
5. a) Mention some recent inventions related to Veterinary Parasitology 3.0
b) Define immunity and classify. Write down how to break down the parasitic immunity. 4.0
c) Why it is difficult to produce vaccine production against parasites. 3.0

Chattogram Veterinary and Animal Sciences University
Department of Pathology and Parasitology
Final Examination of Masters of Science in Parasitology
Course Title: Immunoparasitology
Course Code: IPR-601
Semester: January- June' 2023

Time: 2 hours

Total marks: 40

Answer any **FOUR (4)** questions from the following. Figures in the right margin indicate the full marks.

1. a). What is immunoparasitology? Write down the scope of immunoparasitology in veterinary and medical research.. 5
b). Describe the adaptive immune responses to '*Leishmania*' infection. 5
2. a). Define antigen. Write down the properties of a good antigen. 5
b). Define the 'clusters of differentiation molecule'? Classify major cells of immune system based on the 'clusters of differentiation molecules'? 5
3. a). Draw and label a cross section of a lymph node showing the distribution of immune cells on it. 5
b). Define hypersensitivity? Describe the 'type-III hypersensitivity' with an appropriate example. 5
4. a). Define complement. Describe the 'Classical pathway' of complement system in destroying a microorganism. 5
b). Briefly describe the immune response to 'Hookworm' infection in man. 5
5. a). What is PAMP and PRR? Classify TLR with their ligands. 5
b). Explain the mechanism of endogenous antigen processing and presentation. 5
6. Write short note on any two (2) of the following. 5X2=10
 - i) Immunity to *Plasmodium falciparum* infection in human
 - ii) Phagocytic cells
 - iii) MHC molecules
 - iv) Mechanism of antibody production

Chittagong Veterinary and Animal Sciences University
Department of Pathology and Parasitology
MS in Parasitology
January - June Semester Final Examination-2023
Course title - Helminthology
Course code – HPR - 601
Full Marks - 40, Time - 2 hours

Answer any **FOUR** questions in the following

1. a) Illustrate the biological properties of the genus of Fasciolidae family. 3.0
b) What are the differential features between bursate and non-bursate parasites. 2.0
c) Briefly describe the general pattern of the life cycle of digenetic trematode. 5.0
2. a) Mention the morphology of schistosomatidae and paramphistomatidae family and mention its genera with species. 5.0
b) How will you differentiate Fasciola eggs from Paramphistomum egg. 2.0
c) Briefly describes the snoring disease in cow. 3.0
3. a) How will you differentiate Cyclophyllidea and Pseudophyllidea? 4.0
b) Write short notes on 3X2=6.0
i) Swimmer itch ii) *Dirofilaria immitis* infection in dog
4. a) Briefly describe the morphology, life cycle and control measures of *Toxocara canis* infection in dog. 4.0
b) Describe the laboratory diagnostic procedures of the following diseases (any three). 3X2=6.0
i) Haemonchosis ii) Trichinellosis iii) Fasciolosis iv) Moniezirosis
5. a) Compare the life cycles among the *Strongylus* spp. 5.0
b) As a field veterinarian, what would be your suggestion to control the parasitic infection in national level. 5.0

Chattogram Veterinary and Animal Sciences University

Faculty of Veterinary Medicine

Department of pathology and parasitology

MS in Parasitology (January-June semester) Final Examination'2023

Course title: Avian parasitology

Course code: APR-601

Full marks: 40

Time: 2 hours

Answer any **FOUR** questions from the following:

1. (a) Mention the factors responsible for the occurrence and distribution of parasites in a geographical area. 5
b) List the important nematodes of chicken, duck and pigeon with their intermediate host and location. 5
2. (a) Describe the general harmful effects of poultry parasites. 5
b) Write down the life cycle of *Eimeria spp* and their control measures. 5
3. Write short note on (Any two) 5*2=10
 - a. Oviduct fluke
 - b. Red mite
 - c. Gape worm
4. (a) Which cestode species is considered as the most pathogenic cestode of chicken and why? 4
b) What are the common steps you will follow to control parasites in poultry? 6
5. (a) Enlist the poultry cestode and their morphological features. 4
b) Describe the economic importance, epidemiological features and control measures against *Ascaridia galli* infection in chicken. 6

Chattogram Veterinary and Animal Sciences University

Faculty of Veterinary Medicine

Department of pathology and parasitology

MS in Parasitology (January-June semester) Final Examination'2023

Course title: Parasites of Wild and Zoo Animals

Course code: ZWA-601

Full marks: 40

Time: 2 hours

Answer any **FOUR** questions from the following:

1. (a) Define Zoonosis. List the zoonotic diseases of non-human primates with their predilection site 5
b) Discuss the life cycle and pathology of broad fish tapeworm of bear. 5
2. (a) List the parasites of python. Describe the morphology and life cycle of hookworm of python. 5
b) What are the standard procedures of collection, preservation and shipment of biological samples from a zoo to the diagnostic lab. 5
3. Write short note on (Any two) 5*2=10
 - a. Verminous pneumonia in deer
 - b. Strongylosis in donkey
 - c. Gape worm in peacock
4. (a) Define mange. How will you manage demodicosis in a Royal Bengal Tiger? 6
b) What are the common steps you will follow to control parasites in captive condition? 4
5. (a) Enlist the helminth parasites of wild birds with their predilection site, intermediate host. 4
b) Describe the etiology, life cycle and pathology of coccidiosis in rabbit. 6

Chattogram Veterinary and Animal Sciences University

MS in Pathology

January- June Semester Final Exam 2023

Course Title: Reproductive Pathology

Course code: RPT-601

Full marks: 40, Time: 2 hours

(Answer any 5 questions from the following. Figures in the right margin indicate full marks)

1. a. What do you mean by abortion? Write down the cause of abortion in dairy cows 3
b. Write down the pathogenesis and pathology of brucellosis in cattle 5
2. a. What are the common cysts found in ovary. Briefly describe them 5
b. What are the differences between abortion and stillbirth 3
3. a. Write down the pathogenesis and pathology of campylobacteriosis in cattle 5
b. Enlist some etiological agents that cause endometritis in cows 3
4. a. What are the reproductive indices? Describe them shortly 4
b. How Negative energy balance effects on reproduction? 4
5. a. What are the reproductive hormones? Write down their functions 4
b. What are the factors that influence infertility in cattle? 4
6. a. What is 'Freemartin' and 'Cryptorchidism'? 4
b. Why freemartinism is evident only in females? 4
7. a. Briefly describe the repeat breeding, retained fetal membrane and endometriosis 6
b. Enlist the causes of retention of placenta 2

Chattogram Veterinary and Animal Sciences University
Department of Pathology and Parasitology
M. S. in Pathology
Jan- June Semester Final Exam. 2023
Sub: Pathology of Parasitic Diseases (Theory)
Course code- PPT-601
Total Marks- 40, Time- 2 hours

Figures in the right margin indicate full marks. Answer any FIVE of the following questions.

1. (a) In which disease of cattle there is found inverse age resistance?
Describe the pathogenesis and pathology of this disease. 6.0
(b) How would you diagnose hemoparasitic diseases in laboratory? 2.0
2. (a) What are the common pathologic effects produced by parasites on host. 4.0
(b) Describe the pathogenic significance of heart worm infection in dog. 4.0
3. List the parasites causing gastroenteritis in cattle. Describe the pathogenesis and pathology produced by *Haemonchus contortus* in cattle. 8.0
4. Write down the pathogenic significance of any two of the following conditions: 4x2=8.0
 - (i) *Strongylus vulgaris* infection in horse.
 - (ii) Nodule worm disease of cattle.
 - (iii) Myiasis.
5. (a) Why the adult cestodes are found in the upper part of intestine and which stage of cestodes are more harmful? Write down the pathologic significance of echinococcosis. 5.0
(b) Write down the pathology of verminous pneumonia in calf. 3.0
6. (a) Name four important ticks of cattle and mention their role in disease transmission. 2.0
(a) Write down the pathogenesis and pathology of fascioliasis in cattle. 6.0

Chittagong Veterinary and Animal Sciences University
Faculty of Veterinary Medicine
MS in Pathology
January-June Semester Final Examination 2022
Course Title: Pathology of Bacterial and Viral diseases (Theory)
Course Code: BVD-601 (T)
Full marks: 40, Time: 2 hours

[Figures in the right margin indicate full marks. Answer any 5 (five) questions from the following]

1. a. Illustrate the virulence factors that contribute to the pathogenicity of the organism. 5
b. Write with diagram the effector mechanisms of immunity against intracellular bacteria. 3
2. a. Why does BQ affected muscle turn black? 2
b. Write down the transmission, pathogenesis, pathology and differential diagnosis of anthrax in cattle. 6
3. a. Write down the predisposing factors, pathogenesis and pathology of haemorrhagic septicemia in buffalo. 4
b. Write down the etiology, transmission, pathogenesis and pathology of “Lumpy Jaw” in cattle. 4
4. a. Write in brief about immune response to viruses and mechanism of virus induced tissue damage. 4
b. Write down the transmission, pathogenesis and pathology of bovine viral diarrhoea and mucosal disease. 4
5. a. Write down the pathogenesis and pathology of a disease in dog that are icteric and increase alanine aminotransferase level in blood. 5
b. Write down the transmission and pathology of bovine spongiform encephalopathy. 3
6. a. Write down the transmission, pathogenesis, pathology and complications of “Foot and Mouth Disease” in cattle 5
b. Write in brief about the pathology of PPR in goat. 3

Chittagong Veterinary and Animal Sciences University

MS in Pathology

January-June Semester Final Examination 2023

Course title: Pathology of Metabolic Diseases

Course code: MPT - 601

Full marks: 40, Time: 2 hours

(Figures in the right margin indicate full marks. Answer **any 5 questions** from the following)

1. a. What do you mean by metabolic diseases? 3
b. In bovine acetonemia, which acids are evident in blood? Describe how these acids are form in blood? 5
2. a. In dairy cows, when and how parturient paresis can develop? 5
b. Enumerate the clinical stages of parturient paresis. 3
3. a. How selenium and vitamin E protects cell membrane from lysis? What happens to the cell in deficiency of these minerals? 5
b. What are the changes observed in affected tissue in selenium and vitamin E deficiency? 3
4. a. Write a short note on post parturient hemoglobinuria. 4
b. Write down the synonyms of hypomagnesemia. Why animals suffer with cardiovascular failure due to hypomagnesemia? 4
5. a. Write down how azoturia can cause death in animals. 4
b. Write down the pathology of Azoturia. 4
6. a. What do you mean by rickets and osteomalacia? How rickets is developed in calves? 5
b. Write down the economic importance of metabolic diseases. 3