

**Chittagong Veterinary and Animal Sciences University**  
**Department of Pathology and Parasitology**  
**MS in Pathology**  
**July-December Semester Final Examination 2019**  
**Course title: Pathology of Extraneous Poisoning**  
**Course code: PPT-602**  
**Full marks: 40, Time: 2 hours**

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

1. a. How urea poisoning might develop in domestic animals? 3  
b. Describe the acute and chronic arsenic poisoning in domestic animals. 5
2. a. Write a short note on lead poisoning. 4  
b. What are the toxic constituents of datura poisoning? Write down the pathogenesis and pathology of datura poisoning. 4
3. a. Write down some common pesticides used in Bangladesh. 2  
b. What are the common lesions found in pesticide poisoning? 2  
c. Describe the pathogenesis of organochlorine compounds poisoning. 4
4. a. Which plant is responsible for thiamine deficiency in animals? Write down the toxic principles of this plant. 2  
b. List the toxic constituents of snake venom. 2  
c. Describe the hemotoxic effects of snake venom. 4
5. a. What is the toxic component of Strychnos nux-vomica? 1  
b. Write down some significant lesions of Strychnos nux-vomica poisoning. 3  
c. Describe the pathogenesis of cyanide poisoning. 4
6. a. Write down the pathogenesis of nitrite poisoning? 4  
b. Which plant contains coumarine? What happens when an animal eat this plant? 4

**Chittagong Veterinary and Animal Sciences University**  
**Department of Pathology and Parasitology**  
**MS in Pathology**  
**July- December Semester Final Exam. 2019**  
**Sub: Avian Pathology. Course code- APT-601**  
**Total Marks- 40, Time- 2 hours.**

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

1. (a) Why IBD is more common in young chicks? List the gross changes found during post mortem examination of chickens affected with IBD. 5.0  
(b) Write a short note on avian leucosis. 3.0
2. What is the relationship between coccidiosis and necrotic enteritis in poultry? Write down the causes, pathogenesis and pathology of cecal coccidiosis. 8.0
3. (a) Describe etiology, epidemiology, pathogenesis and pathology of CRD. 6.0  
(b) Write down the postmortem findings of New Castle disease. 2.0
4. (a) Why vitamin A is very important in poultry? What type of lesion is produced in oesophagus of layer bird due to deficiency of vitamin A? 4.0  
(b) Describe the conditions produced in poultry due to the deficiency of vitamin E. 4.0
5. (a) Name the common diseases of poultry caused by Gram negative bacteria. Write down the pathology of pullorum disease in poultry. 4.0  
(b) Briefly describe the pathogenesis and pathology of common fungal disease in chicken. 4.0
6. Write down the post mortem findings of the following diseases: (any four)-  
(a) Psittacosis, (b) Fowl cholera, (c) Infectious bronchitis,  
(d) Histomoniasis in turkey, and (e) Duck plague. 8.0

**Chittagong Veterinary and Animal Sciences University**  
**Department of Pathology and Parasitology**  
**MS in Pathology**  
**July-December Semester Final Examination 2019**  
**Course title: Immunopathology**  
**Course code: IPT-602**  
**Full marks: 40, Time: 2 hours**

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

1. What do you mean by immunity and immunopathology? What are the types of immune responses works in living body? Describe briefly. 8
2. a. What is hypersensitivity reaction? 2  
b. Describe Type I hypersensitivity reaction briefly. 6
3. a. Define autoimmunity, alloimmune and alloantigen. 3  
b. What do you mean by transplantation rejection? 5
4. a. What are the types of immunodeficiency diseases? 2  
b. Describe the pathogenesis of systemic lupus erythematosus. 6
5. a. Write down the pathogenesis of delayed type of hypersensitivity. 4  
b. What is juvenile diabetes? 4
6. a. Enlist the organs involved in immune system in a living body. 2  
b. What is acquired immunodeficiency syndrome (AIDS)? 2  
c. Write a short note on myasthenia gravis. 4

**Department of Pathology and Parasitology**  
**MS in Pathology**  
**July- December Semester Final Exam. 2019**  
**Sub: General Pathology. Course code- GPT-601**  
**Total Marks- 40, Time- 2 hours.**

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

1. (a) Describe the microscopic changes found in a dead cell. 5.0  
(b) Differentiate necrosis from post mortem autolysis. 3.0
  
2. (a) How exudates are formed during inflammation? 2.0  
(b) Briefly describe the functions of neutrophils and macrophages. 5.0  
(c) How eosinophils can kill a parasite? 1.0
  
3. (a) What type of gangrene is found in lung and uterus? Write down the microscopic lesions and significance of this type of gangrene. 4.0  
(b) Write down the gross and microscopic lesions of amyloidosis and fatty change. 4.0
  
4. (a) Classify hemorrhage. How you will differentiate hemorrhage from hemorrhagic inflammation? 3.0  
(b) What is thrombo-emboli? What type of thrombus is usually responsible for the formation of thrombo-emboli? 2.0  
(c) Write a short note on nut-meg liver. 3.0
  
5. (a) Write down the causes and mechanism of hemolytic and toxic jaundice. 5.0  
(b) Write down the microscopic lesions of fibrinous and granulomatous inflammation. 3.0
  
6. (a) Mention the microscopic lesions of anaplasia. 2.0  
(b) Define and classify atrophy. 3.0  
(c) How radiation can induce neoplasm? 3.0

**Chittagong Veterinary and Animal Sciences University**  
**Department of Pathology and Parasitology**  
**Final Examination of Master of Science in Parasitology**  
**Semester: July- December'2019**  
**Course Title: Zoonotic Parasites (Theory)**  
**Course Code: ZPR -602**

**Time: 2 hours**

**Total marks: 40**

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

1. a) Define and classify zoonosis. Enlist the sources and methods of transmission of zoonotic diseases with example. 4
- b). List the vehicles implicated to outbreak food and water borne parasitic diseases in animals. How will you control the zoonotic protozoal parasitic infection? 6
2. a). Briefly describe the public health significance of Giardiasis and Opisthorcosis. 4
- b). How will you diagnose the following diseases? (any three) 2x3=6  
i) Echinococcosis ii) Cryptosporidiosis iii) Balantidiosis iv) Toxoplasmosis
3. a). Briefly describe the morphology, life cycle, pathogenesis and pathology of old world hookworm *Ancylostoma doudenale* infection in bitch. 5
- b). Enlisted the parasites which causes infection through penetration of skin. Mention the transmission pattern and life cycle of *Wechereria bancrofti*. 5
4. a). How you differentiates the genus of Fasciolidae family. Mention the morphology and life pattern of *Dirofilaria immitis* in dog. 5
- b). Briefly describe the epidemiology, pathogenesis and life cycle of *Ascaris suum* in swine. 5
5. a) Write down the morphology, pathogenesis and life cycle of *Paragonimus westermani* infection in fox. 4
- b). Write down the short note on (any two): 3X2=6  
i) Cercarial dermatitis ii. Trichinellosis iii) Pernicious anaemia

**Chittagong Veterinary and Animal Sciences University**

**Department of Pathology and Parasitology**

**MS in Parasitology Semester Final Examination**

**Semester: July- December 2019**

**Course Title: Molecular Parasitology**

**Course Code: MPR - 602**

**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). Mention the scopes of molecular parasitology. How modern parasitological research can be benefitted by using molecular tools and techniques. 5  
b). What is gene and genome? Discuss briefly the parasite genomics and its significance in modern science. 5
2. a). What is central dogma? Briefly describe the Watson and crick model of DNA. Draw the double helix structure. 5  
b). What is DNA repair? Elucidate the mechanism of DNA repair. Define mutation and illustrate different types of mutation. 5
3. a). Define mRNA and tRNA and their functions. 5  
b). Draw the structures of major pyrimidines (cytosine, thymine, uracil). 5
4. a). What is a primer? What are the important criteria for designing a primer. Discuss the steps of Polymerase chain reaction (PCR). 5  
b). What is restriction enzyme? Mention their uses with example. 5
5. a). Mention the extraction and purification process of DNA. How will you proceed with whole genome sequencing of a parasite? 5  
b). What is transcription? Describe the process of transcription. 5
6. Write short note (s) on (any TWO): 5x2=10
  - a) Drug resistance in parasites
  - b) SDS-PAGE
  - c) Antigenic variation in trypanosomes
  - d) Real time PCR

Chittagong Veterinary and Animal Sciences University  
Department of Pathology and Parasitology  
July - December Semester Final Examination - 2019  
MS in Parasitology  
Course title - Protozoology  
Course code PRT - 602  
Full Marks - 40, Time - 2 hours

Answer any **FOUR** questions in the following

1. a) Give the list of protozoa which causes diarrhoea in calves. Differentiate trophozoite from cyst and eukaryotic from prokaryotic cell. 5.0  
b) How can you diagnose the following protozoan infections in Parasitology Lab.? (Any two) i) Plasmodium ii) Neospora iii) Hepatozoon 2.5x2=5.0
2. a) Illustrate the salivarian and stercorarian life cycles sketch of trypanosomes. 6.0  
b) Enlist the protozoa that cause abortion in cow. How will you manage a bull and cow infected with *tritrichomonas foetus*? 4.0
3. Briefly describe the risk factors and public health significance of the followings: 2x5=10.0  
(i) Toxoplasmosis (ii) Canine leishmaniosis (iii) Babesiosis (iv) Cryptosporidiosis  
(v) bovine ehrlichiosis
4. a) List the water borne protozoa in animals. How will you control the zoonotic protozoal diseases? 5.0  
b) Write short notes on giardiasis and anaplasmosis in goat. 5.0
5. a) Enumerate the haemoprotozoa of livestock. Mention the epidemiological factors and pathogenesis and pathology of bovine babesiosis. 5.0  
b) Illustrate the different form of leishmaniosis in fox. Write short note on surra in mare. 5.0

**Chattogram Veterinary and Animal Sciences University**  
**Department of Pathology and Parasitology**  
**Final Examination of Master of Science in Parasitology**  
**Semester: July- December'2019**  
**Course Title: Entomology**  
**Course Code: EPR- 602**

**Time: 2 hours**

**Total marks: 40**

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

1. a). Define 'arthropods. Briefly illustrate the structure of body wall of a typical arthropod. 4  
b). Briefly describe the digestive system of a typical arthropod. 4
2. a). Briefly illustrate how morphological adaption of fleas assist them to move comfortably in the body coat of animals. 4  
b). Illustrate the pathogenic significance of fleas and lice infestation in animals. 4
3. a). Briefly depict the salivary glands of a tick and their roles in blood sucking from hosts. 4  
b). Explain how an unfed tick maintain water balance in adverse conditions. 4
4. a). Compare the feeding mechanism of a mosquito, tabanid and housefly with their significant roles in the transmission of vector-borne diseases. 4  
b). Write down the vector importance of mosquitoes, sandflies, balckflies and muscidflies. 4
5. a). Briefly describe the morphological features, life cycle and pathogenesis of 'Gad fly' infestation in sheep. 4  
b). List the available cattle tick, mite, lice and flies in Bangladesh. 4
6. a). Differentiate 'myiasis' from 'strike'. Mention the risk factors and control of myiasis in a goat. 4  
b). Write short note 'Tick paralysis' and 'Warble fly'. 4



**Chittagong Veterinary and Animal Sciences University**  
**Department of Pathology and Parasitology**  
**MS in Parasitology Semester Final Examination**  
**Semester: July- December 2019**  
**Course Title: Parasitic Ecology and Epidemiology**  
**Course Code: PEE - 602**  
**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 do you mean by faunistic study of parasite? Mention types of parasites with example. 5  
b). What is host specificity and geographical distribution of parasites. 5
2. a). Explain the role of socio-cultural determinants on parasitic infection. 5  
b). Mention general control of parasites in a herd. 5
3. a). What do you mean by epidemic, endemic and pandemic outbreak? Give example. 5  
b). Write down the implications of epidemiology in parasitology. 5
4. a). How human behavior influences the epidemiology of zoonotic diseases? 5  
b). Give examples of zoonotic parasitic diseases which influences human behavior. 5
5. a). <sup>Mention</sup> List the bionomics of *Haemonchus* and *Eimeria spp.* 5  
b). Write down the guidelines for controlling drug resistance present in a herd. 5
6. Write short note (s) on (any TWO): 5x2=10
  - a) Host-vector-parasite relationship
  - b) Helminth vaccine and biological control
  - c) Outbreak investigation
  - d) Guinea worm eradication program