

**Chittagong Veterinary and Animal Sciences University**  
**Faculty of Veterinary Medicine**  
**Department of Pathology and Parasitology**  
**July - December Semester Final Examination-2017**  
**MS in Parasitology**  
**Course Title: Zoonotic Parasites (Theory)**  
**Course Code: ZPR-602**  
**Full marks-40, Full time: 2 hour**

**Answer any Five (5) the following questions:**

1. a) Define and classify zoonosis. Enlist the zoonotic parasites of wild animals. 4.0  
b) Write down the life cycle, pathogenesis and pathology of *Trichinella spiralis*. 4.0
2. a) Briefly describe the life cycle and pathogenesis *Fasciolopsis buski* in pig. 4.0  
b) Write down the differences between *Dirofilaria immitis* and *Angiostrongylus vasorum*. 4.0
3. a) Briefly describe the transmission pattern and life cycle *Leishmania* spp. 4.0  
b) Write short note on Giant kidney worm in dog. 4.0
4. a) Briefly describe the morphology and life cycle of smallest zoonotic cestode in dog. 4.0  
b) Write down a short note on "Immune response against schistosomiasis." 4.0
5. a) Briefly describe the morphology and life cycle of *Echinostoma revolutum* in duck. 4.0  
b) Write down the difference between trypanosome and cyst of *Balantidium coli*. 4.0
6. Write down the scientific name of the following parasites (any two): 4.0x2=8.0
  - a) *Spirocercalupi* infection
  - b) Bovine trypanosomiasis
  - c) Cercarial dermatitis

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**July - December Semester Final Examination-2017**  
**MS in Parasitology**  
**Course Title: Entomology (Theory)**  
**Course Code: EPR -602**  
**Full marks-40, Full time: 2 hour**

**Answer any five (5) the following questions:**

1. a) Enumerate the morphological features of arthropod with reproductive system. 4.0  
b) Briefly describe the harmful effect of arthropod on hosts. 4.0
2. a) Define and classify myiasis. Distinguished myiasis from strike. 4.0  
b) Write down the feeding mechanism and pathogenic significance of *Culex* spp. 4.0
3. a) Write down the morphological difference of the followings (any two): 2x2=4.0  
i) Mallophaga and Anoplura ii) Burrowing and non-burrowing mite iii) Tick and flea  
b) Write down the Life cycle and pathogenesis of *phthiraptera*. 4.0
4. a) Write down the life cycle and vector importance of *Ixodes ricinus*. 4.0  
b) Write down the preventive measures to control tick. 4.0
5. a) Enlisted the lice found in domestic mammals. Briefly describe the morphology and life cycle of *Heterodoxus* spp. 4.0  
b) Write down the pathogenesis and pathology of demodectic mange of dog. 4.0
6. Write short notes on (any two) 4x2=8.0
  - a) Red mite of poultry
  - b) Tick paralysis
  - c) Canine flea

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Faculty of Veterinary Medicine

Department of Pathology and Parasitology

MS in Parasitology (July-December semester) Final Examination' 2017

Course Title: Parasitic Ecology and Epidemiology

Course code: PEE-602

Total Marks: 40

Time : 2 hours

Answer any four (4) questions from the following

- 1(a) Define biotic and abiotic factors with example. Briefly describe the effect of these two factors on the infection biology of parasite. 6.0
- (b) 'Climate change may promotes the occurrence of parasitic diseases' justify the statement. 4.0
- 2 (a) Mention the intervention strategies that were implemented for GWEP (Guinea Worm Eradication Programme) in Africa. 6.0
- (b) Explain the role of socio-cultural determinants on parasitic infection. 4.0
- 3(a) Design the systemic approach for outbreak investigation. 6.0
- (b) What do you mean by epidemic, endemic and pandemic outbreak? Give example 4.0
- 4 (a) Explain the Density dependent control of parasite with example. 4.0
- (b) What measures will you take to reduce soil transmitted nematode infection from a community. 6.0
- 5 (a) Describe the factors that contribute in long time survival of ascarid eggs in the environment. 2.0
- (b) Write short notes on (any two) 8.0
- i. Hypobiosis      iii. Host-parasite interaction      iii. Over dispersion phenomenon

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MS in Parasitology July-December 2017 semester Final Examination

Subject: Molecular Parasitology, Course code: MPR-601

Time: 2 Hours, Mark: 40

**Answer any FOUR questions:**

1. a) Write down the scopes of molecular parasitology in veterinary science 5  
b) Write short note on drug resistance in parasites? Give example. 5
2. a) What is nucleic acid and nucleotide? What is gene and genome? 5  
b) What is central dogma? Define gene expression and regulation. 5
3. a) Define protein. Discuss various structures of a protein and label it. 5  
b) What is protein sorting, describe with example. 5
4. a) What is genetic code and mRNA splicing? 5  
b) Briefly describe replication and transcription? 5
5. a) What type of antigenic variation occurs in trypanosomes? Explain. 5  
b) What type of antigenic variation occurs in *Leishmania*. Briefly describe it. 5
6. Write short note on (any two):- 5x2=10
  - a) Polymerase chain reaction
  - b) SDS-PAGE
  - c) Protein tertiary structure
  - d) Real time PCR

July – December Semester Final Examination' 2017

Master of Science in Parasitology

Subject: Protozoology

Course code: PPR-602. Credit: 2 (theory)

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Time: Two hours

Total Marks: 40

Answer the following questions

1. With examples describe the different locomotion and reproduction processes of protozoa. 6
  2. With hosts name four cysts forming (extra-intestine location) and four abortion causing protozoa from different genera. 2
  3. Write down the morphologies of the following structures carried protozoa- 4
    - a) Ventral disc b) Peristome c) Pseudopodium d) Undulating membrane
  4. Name the four protozoa responsible for Coccidiosis in chickens. How can you prevent the protozoa in a chicken farm? 5
  5. Write down the names of the protozoa which show following phenomena. Describe the processes as well. 5
    - a) Immune evasion b) Immunity in reproductive tract c) Auto-infection
  6. Which coccidian protozoan shows facultatively-heteroxenous lifecycle? Write down the lifecycle and pathogenic significance of the protozoa. 5
  7. Write down the transmission processes of the following protozoa- 4
    - a) Ehrlichia b) Histomonas c) Balantidium d) Leucocytozoan
  8. How can you diagnose following protozoa infections in laboratory- 4
    - a) *Trichomonas gallinae* b) *Theileria hirci* c) *Babesia bigemina* d) *Leishmania donovani*
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**MS in Pathology**  
**July-December Semester Final Examination 2017**  
**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. What are the sources of arsenic poisoning? 2  
b. Write down the pathogenesis of the acute and chronic arsenic poisoning in domestic animals. 6
2. a. What are the sources and pathogenesis of sweet clover poisoning. 5  
b. Write down the steps in diagnosis of sweet clover poisoning cases. 3
3. Describe the pathogenesis of pesticide compounds poisoning. 8
4. a. Which plant is responsible for thiamine deficiency in animals? 1  
b. Describe the neurotoxic and hemotoxic effects of snake venom. 7
5. a. What is strychnine poisoning? 2  
b. Which trees are commonly known for causing oleander poisoning? 2  
c. Describe the pathogenesis of cyanide poisoning. 4
6. a. How anoxia develops in nitrite poisoning? 4  
b. Which plant contains atropine? What happens when an animal eats this plant? 4

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**MS in Pathology**  
**July-December Semester Final Examination 2017**  
**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. Describe the pathogenesis of hypersensitivity type I and II. 8
2. a. Define immunopathology and immunity. 2  
b. Describe natural and acquired immunity. 6
3. a. Describe the factors affect the immunity in a living body. 6  
b. What do you mean by transplantation rejection? 2
4. a. Define autoimmune disease. 2  
b. Describe the pathogenesis of systemic lupus erythematosus. 6
5. a. Write down the pathogenesis of delayed type of hypersensitivity. 4  
b. Describe how cancerous cell may incite an autoimmune response. 4
6. a. Enlist the organs involved in immune system in a living body. 2  
b. What is acquired immunodeficiency syndrome (AIDS)? 2  
c. Describe myasthenia gravis briefly. 4

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**MS in Pathology**  
**July- December Semester Final Exam- 2017**  
**Sub: General Pathology. Course code- GPT-602**  
**Total Marks- 40, Time- 2 hours**

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

1. (a) What are the microscopic changes found in a dead cell? 4.0  
(b) Write down the microscopic lesions of infarct and moist gangrene. 4.0
  
2. (a) What are the steps found in inflammation during Chonheim's observation? 3.0  
(b) Name the cells involved in the process of inflammation. Describe different types of phagocytosis of neutrophils. 3.0  
(c) What type of inflammation is found in case of diphtheria? Write down its microscopic lesions. 2.0
  
3. (a) Write down the causes of metastatic calcification and microscopic lesions of dystrophic calcification. 3.0  
(b) How will you differentiate three types of jaundice? 3.0  
(c) Show the mechanism of photosensitization dermatitis in sketch form. 2.0
  
4. (a) Describe the causes, mechanism and microscopic lesions of fatty change. 6.0  
(b) Define and classify atrophy. 2.0
  
5. (a) How will you differentiate haemorrhage from haemorrhagic inflammation? Describe different types of haemorrhages. 5.0  
(b) Write short note on Nut Meg liver. 3.0
  
6. (a) Describe the in vivo properties of neoplastic cells. 4.0  
(b) Briefly describe the mechanism of the production of neoplasms by ionizing radiation. 4.0



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**July- December Semester Final Exam- 2017**  
**Sub: Avian Pathology. Course code- APT-602**  
**Total Marks- 40, Time- 2 hours**

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

1. Name the common diseases of poultry caused by Gram negative bacteria.  
Describe the different forms of colibacillosis commonly found in poultry. 8.0
- 2 (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
3. What is the relationship between coccidiosis and necrotic enteritis in poultry?  
Write down the causes and pathology of coccidiosis in chickens and black head disease in turkey. 8.0
4. (a) Why it is very difficult to control mycoplasmosis in poultry? Write down the pathogenesis and pathology of mycoplasmosis in a broiler flock. 5.0
- (b) Write a short note on brooder pneumonia. 3.0
5. (a) Write down the gross lesions of infectious bursal disease. 4.0
- (b) Enlist the neoplastic diseases of poultry. Write a short note on lymphoid leucosis. 4.0
6. Write down the post mortem findings of the following diseases: (any four) 8.0  
(a) Newcastle disease, (b) Pullorum disease, (c) Avian influenza,  
(d) Infectious bronchitis, and (e) Duck plague.