

**Chittagong Veterinary and Animal Sciences University**  
**Department of Pathology and Parasitology**  
**M. S. in Pathology**  
**Jan- June Semester Final Exam. 2019**  
**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) Describe the pathogenesis and pathology of babesiosis. 6.0  
(b) How would you diagnose hemoprotozoal diseases in laboratory? 2.0
2. (a) Describe the pathogenesis and pathology of fascioliasis in cattle. 6.0  
(b) Write down the pathogenesis of nodule worm disease. 2.0
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) Ascariasis in buffalo calf.
  - (iii) Nasal myiasis in sheep.
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  
(b) Write down the microscopic lesions of the followings: (any two) 3x2= 6.0
  - (i) Canine demodecosis
  - (ii) *Spirocerca lupi* infection in dog.
  - (iii) Hump sore in cattle.

**Chittagong Veterinary and Animal Sciences University**

**MS in Pathology**

**January-June Semester Final Examination 2019**

**Course title: Reproductive Pathology**

**Course code: RPT - 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 is intersex? Briefly describe different types of intersex. 4  
b. Why freemartinism is evident only in females? 4
2. a. What are the types of endometrial hyperplasia? Briefly describe each types. 5  
b. Write a short note on endometriosis. 3
3. a. Name some specific and non specific etiological agents that causes endometritis. 3  
b. Point out the differences in formation of pyometra in bitches and cows. 3  
c. What is hydrosalpinx? Write down the etiology of hydrosalpinx. 2
4. a. Name 5 common cysts found in ovary and describe them briefly. 5  
b. Briefly describe the differences between still birth and abortion. 3
5. a. Write a short note on cryptorchidism. 4  
b. Define the following terms: spermatoc granuloma, spermatofidic giant cell, paraphimosis, Phalloposthitis. 4
6. a. What do you mean by abortifacient infection? Write down the etiology of abortifacient infection in dairy cows. 3  
b. Define repeat breeding and retention of placenta. Briefly describe the causes of retention of placenta 5

**Chittagong Veterinary and Animal Sciences University**  
**MS in Pathology**  
**January-June Semester Final Examination 2019**  
**Course title: Pathology of Bacterial and Viral Diseases**  
**Course code: BVD - 601**  
**Full marks: 40, Time: 2 hours**

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

1. a. Briefly describe the transmission of FMDV in cattle. 2  
b. Sketch the pathogenesis and enlist the pathology of FMD. 6
2. a. Describe how paralysis is developed in botulism in cattle. 4  
b. Enlist the significant gross and microscopic changes of black disease. 4
3. a. Describe the microscopic changes of anthrax in cattle. 3  
b. Write down the diagnostic strategy of anthrax in cattle. 5
4. a. Mention a pantropic viral disease of dog. Describe its gross and microscopic changes in different organs. 5  
b. Describe the diagnostic procedure of rabies in dogs. 3
5. a. Write down the gross changes in respiratory system and GIT in PPR. 4  
b. Make a list of gross lesions found in strangles in horse. 4
6. a. Write down the transmission and pathogenesis of tuberculosis. 5  
b. Mention the microscopic lesions of paratuberculosis in cattle. 3

**Chittagong Veterinary and Animal Sciences University**  
**MS in Pathology**  
**January-June Semester Final Examination 2019**  
**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. Point out how metabolic diseases cause production loss to farmers. 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. Why Azoturia is frequent in horses and on Monday? 3  
b. Sketch the pathogenesis of Azoturia. 5
4. a. Why do you think white muscle disease should be studied under the metabolic diseases? 2  
b. Describe the pathogenesis and pathology of white muscle disease. 6
5. a. What is fat ewe pregnancy toxemia and fat cow syndrome? 3  
b. Which metabolic disease is responsible for hemolysis in dairy cows? Write down its pathogenesis. 5
6. a. What are ketone bodies? How ketone bodies are formed and accumulated into blood to form ketosis? 5  
b. Why animals suffer with cardiovascular failure due to hypomagnesemia? 3

**Chittagong Veterinary and Animal Sciences University**  
**Department of Pathology and Parasitology**  
**Final Examination of Master of Science in Parasitology**  
**Semester: January-June-2019**  
**Course Title: Helminthology**  
**Course Code: HPR – 601**  
**Full Marks – 40, Time – 2hours**

**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 Round worm. Illustrate the cuticular modification of bursate and non-bursate nematodes with examples. 5  
b). Discriminated the different types of oesophagous with their examples. 5
2. a). Illustrate the biological features of the genus of fasciolidae family. 5  
b). Enlisted importance zoonotic parasites of livestock. Mention the biological features, transmission and life cycle of *Trichinella spiralis* in mammals. 5
3. a). Illustrate the morphology and life cycle of *Haemonchus contros* in Nanny goat. 4  
b). Write short notes on (any two) i) Swimmer itch ii) Echinococcosis 3x2=6  
ii) Verminous Pneumonia
4. a). What is snoring disease? How will you confirm this disease? Describe the predisposing and epidemiological factors of humpsore disease. 6  
b). Write short note on Cutaneous larva migrant and visceral larva migrant. 4
5. a). “Ascarid larvae can not survive within a few weeks old chicks”-explain. How a *Neoascaris vitulorum* span its life within a buffalo calf under 6 months of age? Enumerate the epidemiological factors of porcine ascariasis. 5  
b). Discriminate cyclophyllidea and pdeudophylidea. Mention the beef tape worm mentioning its life cycle and control measures. 5

**Chattogram Veterinary and Animal Sciences University**  
**Department of Pathology and Parasitology**  
**MS in Parasitology**  
**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:-**

**10x4= 40**

(All questions bear equal marks)

1. a. Define parasitology and describe its scope in wildlife and their well-being.  
b. Enlist the parasites of wild birds and their predilection sites
2. a. Define mange. How will you manage demodecosis in a Royal Bengal Tiger.  
b. List the parasites of reptiles and their control strategies in captive condition.
3. a. What are the standard procedures of collection, preservation and shipment of biological samples from a zoo to the diagnostic lab located 300 miles away.  
b. Discuss pathology and treatment of *Dibothriocephalus latus* infection in dog.
4. a. Describe necessary procedures towards diagnosis and treatment of hook worm infection in black bear in a safari park.  
b. Define zoonosis. List the zoonotic diseases of primates and their vectors if any.
5. Write short note on (any TWO):-
  - a. Anthrax in elephant
  - b. Verminous pneumonia in a donkey
  - c. Zoonosis and wildlife in one health perspective

**Chattogram Veterinary and Animal Sciences University**  
**Department of Pathology and Parasitology**  
**MS in Parasitology**  
**Course title: Avian Parasitology**  
**Course code: APR-601**  
**Full marks: 40 Time: 2 hours**

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

**10x4= 40**

(all questions bear equal marks)

1. a. List the important nematodes of chicken, duck and pigeon with their final host and location  
b. Discuss the life cycle, pathology and control of ascariasis in poultry.
2. a. Write down the life cycle of *Eimeria* spp. and their control measures.  
b. Draw and label a typical oocyst of *Eimeria* spp.
3. a. List the general harmful effects of poultry parasites  
b. What are the common steps you will follow to control ectoparasites in poultry.
4. a. List the poultry cestodes and their morphological features  
b. Describe the pathology and control of gape worm infection in poultry
5. Write short note on (any TWO):-
  - a. Self cure phenomenon
  - b. Scaly leg mite
  - c. Black head disease

**Chattogram 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**  
**Course Code: VDT-601**  
**Semester: January- June' 2019**

**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). Define and enlist five (5) available tropical and neglected tropical diseases of animals with their available vectors in Bangladesh. 5
- b). Write down the scopes of tropical disease research in veterinary science. 5
2. a). What is vector competency? Explain the factors associated with the transmission of tick-borne diseases. 5
- b). How does an unfed tick maintain water balance in adverse conditions? 5
3. a). Write down the vector importance of the following. 5  
    i) Sandflies   ii) Biting Midges   iii) Horseflies   iii) Aedes mosquitoes
- b). 'Tabanid flies' are more efficient mechanical vectors than 'Sandflies'-Justify. 5
4. a). Briefly discuss the 'integrated vector control strategies' in the prevention and control of vector-borne tropical diseases. 5
- b). How do you prevent and control ticks and tick-borne diseases in hilly and coastal areas of Bangladesh? 5
5. a). Briefly describe the bionomics of the following vectors. 5  
    i) Sandflies   ii) Tsetse flies   iii) Anopheles mosquitoes
- b). Define vector with its classification? Illustrate types of biological vectors with appropriate examples. 5



**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' 2019**

**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 complement? Illustrate how classical pathway of complement system helps to destroy microorganisms. 5
- b). Define immunoglobulin? Distinguish IgG from IgM. 5
2. a). What is MHC molecule? Illustrate the processing of an exogenous antigen presentation by a dendritic cell. 5
- b). What is CD molecule? Classify major cells of immune system based on CD molecules? 5
3. a). What is PAMP and PRR? Classify TLR with their ligands. 5
- b). Define hypersensitivity? Describe delayed type of hypersensitivity with an example. 5
4. a). Illustrate the role of neutrophils and CD4<sup>+</sup>T cell in the protection of Kala-azar. 5
- b). Discuss the recent approaches to the development of Kala-azar vaccine. 5
5. a). Write down the humoral immune responses to Hookworm infection. 5
- b). Briefly discuss on the immunoregulatory aspect of the anti-hookworm immune responses. 5
6. a). Discuss the adaptive immune responses to *Toxoplasma gondii* infection. 5
- b). Why is it difficult to produce vaccine against trypanosomiasis? 5

**Chittagong Veterinary and Animal Sciences University**  
**Department of Pathology and Parasitology**  
**Final Examination of Master of Science in Parasitology**  
**Semester: January-June-2019**  
**Course Title: General parasitology**  
**Course Code: GPR – 601**  
**Full Marks – 40, Time – 2hours**

**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) Discriminate the different types of host and host parasites association. 5  
b) Write short notes on Self cure phenomenon and Spontaneous cure. 2.5x2=5
2. a) Explain the investigation procedure for the identification of gastrointestinal parasitic infection in cattle. 5  
b). Briefly describe the importance of anthelmintic in controlling parasites. 5
3. a). Illustrate the sources of infection, mode of transmission and injuries effects of parasites on host. 6  
b). What is helminthes. Describe with figures various developmental stages of digenetic trematode. 4
4. a). Mention the factors that affects the densities and distribution of parasites. 6  
b). Enumerate some recent inventions related to veterinary parasitology. 4
5. a). Define drug susceptibility and drug resistance. Mention kind of measures should be taken to prevent anthelmintic resistance in animals. 4  
b). Explain the following terms (any six): 1x6=6
  - i) Facultative and obligatory parasites
  - ii) Vector and intermediate host
  - iii) Hypobiosis and spring rise
  - iv) Aberrant and pseudoparasites
  - v) Histozoic and coelozoic parasite
  - vi) Reservoir and paratenic host
  - vii) Hyperparasites and proliferous parasites

M.S. in Surgery; January-June Semester-2019

Subject: **Large Animal Surgery (Theory)**

Course code: LAS 601

**Total Marks: 40**

**Time: 2 (two) hours**

Department of Medicine and Surgery

Faculty of Veterinary Medicine

Chittagong Veterinary and Animal Sciences University

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

1. (a) What is the ideal time for dehorning in dairy calves? Mention the procedures of dehorning in calves? 04
- (b) Briefly describe the different stages of wound healing in surgery. 04
- (c) What are the common factors that affect wound healing process in animal? 02
2. (a) Do cows have a complete mediastinum? Of what significance of this when a pericardiotomy is performed? 03
- (b) Why is jugular distention a common clinical sign associated with traumatic pericarditis? What other diseases may be listed in a differential diagnosis associated with jugular distention? 04
- (c) When would one consider pericardial effusion drainage simply by paracentesis? List some advantages and disadvantages of paracentesis. 03
3. (a) Under what circumstances would you consider performing a rumenotomy for treatment of oesophageal obstruction? 02
- (b) How should the placenta be handled after a caesarean section? Why is starting the suture line at the caudal aspect of the uterine incision recommended? 03
- (c) Describe the various techniques of intestinal anastomosis used in veterinary surgery. 05
4. (a) Why might you hesitate to cast a patient with marked abdominal tympany for surgery? Why is such a patient not a good prospect for general anesthesia? 04
- (b) What are the common sites for coeliotomy? What are the merits and demerits of choice for midline incision in large animal during laparotomy? 03
- (c) What prime advantages does a caesarean section have over a fetotomy? 03
5. Write short notes on *any two* of the followings- 2x5=10
  - (a) Urolithiasis correction in a calf
  - (b) Upward fixation of patella in cattle
  - (c) External fixation for large animals
  - (d) Correction of teat fistula in a dairy cow

**Chittagong Veterinary and Animal Sciences University**  
**Faculty of Veterinary Medicine**  
**Department of Medicine and Surgery**  
**M. S. in Surgery, Semester: January-June, 2019**  
**Subject: Orthopaedic Surgery**  
**Course Code: ORS 601; Credit: 2**  
**Total Marks: 40**  
**Time: 2 (Two) Hours**

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

1. A dog suffering from lameness both forelimb and hindlimb. Write down the detail orthopaedic examination procedure in dog. 10.0
2. Write down breed predisposition/incidence of patellar luxation in dog and cat. How will you diagnose a dog suffering from patellar luxation? Describe the different surgical techniques for correction of patellar luxation. 10,0
3. Describe the fracture healing process specially primary and secondary healing and different bone grafting techniques with their indications. 10
4. Describe the different surgical techniques for the correction of hip dislocation in dog and cat. What are the common methods used for tendon repair in cattle? 10.0
5. Write down in brief the common conventional or external coaptation and internal fixation techniques for long bone fracture management in a dog and cat. 10.0
6. Write short note on following conditions- Legg-Perthes disease, panosteitis, arthrodesis. 10.0

**Chittagong Veterinary and Animal Sciences University**  
**Faculty of Veterinary Medicine**  
**Department of Medicine and Surgery**  
**MS in Surgery, Semester: January-June, 2019**  
**Subject: Large Animal Anaesthesiology**  
**Course Code: LAA 601; Credit: 2**  
**Total Marks: 40**  
**Time: 2 (Two) Hours**

(Figures in the right margin indicate full marks. Answer any **FOUR** questions of the followings)

1. Mention different parts with their functions of inhalation anaesthetic machine. How will you introduce ET in animals? What are the advantages of ET in general anaesthesia? What are the effects of isoflurane and sevoflurane anaesthesia in different body system? 10.0
2. Classify local anaesthetics with mode of action. Write down the patient preparation in large animal for general anaesthesia. What are the effects of local anaesthetic in intravenous injection? 10.0
3. Write down in detail the different application methods/ procedure of local anaesthetics in cattle and goat with common nerve block. 10.0
4. Describe the recording information during anaesthesia in case of dog. What are the advantages of muscle relaxant in veterinary profession? Classify muscle relaxants with mode of actions and reversal agents used for neuromuscular blockade. 10.0
5. Mention the possible postanaesthetic complications/ accidents during large animals surgery. Write down the prevention and treatment of such complications? What do you mean by cardiopulmonary arrest and resuscitation (CPR)? 10.0
6. Write short note on ventilation in small and large animal anaesthesia. 10.0

**Department of Medicine & Surgery**  
**MS in Theriogenology**  
**Semester January-June, 2019**  
**Course Title: Advances in Andrology and Male Infertility**  
**Course Code: AMI-601 (Theory)**  
**Duration: 2 hour**  
**Total Mark: 40**

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

1. a. A 6 years old, 20 kg Doberman male dog came to Teaching and Training Pet Hospital, CVASU, Dhaka with history of swelling in scrotum, pain in palpation, local hyperthermia, reluctant to stand or walk, mucopurulent discharge with urine. Diagnose the case and prepare a prescription for it. 5
- b. Mention the objectives of preparing teaser bull. How will you prepare a teaser bull? 5
2. a. How will you differentiate paraphimosis from priapism? 3
- b. "Fertility of a bull is of paramount importance for any successful breeding programme" justify. 7
3. Write down short note on (any of two) (5×2)
  - i. Impotentia Coeundi and impotentia generandi
  - ii. Prostatitis
  - iii. Anorchism and monorchism
4. a. Enlist the risk factors associated with testicular degeneration in a male. 5
- b. Briefly describe coital injuries and reproductive behavior of a male. 5
5. a. Enumerate the indications for testicular biopsy. How does testicular biopsy help in assisted reproductive technology? 8
- b. Enlist the diseases and disorder of male genital system 2

Chittagong Veterinary and Animal Sciences University  
Faculty of Veterinary Medicine  
Department of Medicine and Surgery  
MS in Medicine Final Examination' 2019  
Semester: January - June  
**Sub: Veterinary Dermatology**  
Course Code: VED-601

Total Marks: 40, Time: 2 hours

(Figures in the right margin indicate full marks. Answer any **five** questions)

1. a. Write down the routine management of dog skin. 04  
b. Write down the ante-mortem and post-mortem importance of skin management. 04
2. a. What are the vitamins and minerals important for skin integrity? What are their vital functions on skin? 04  
b. How can you differentiate parakeratosis from folliculitis? 04
3. Differentiate: scabies from ring worm, foot rot from myiasis, caseous lymphadenitis from dermatophilosis, wart from tumour 08
4. a. What are the skin samples you will collect in parakeratosis, mange, ring worm and bumble foot? What tests will you do and what will be findings? 04  
b. How can you treat orf and pox in sheep? 04
5. a. Differentiate allergic dermatitis and photosensitisation. 04  
b. Write down the treatment of allergic dermatitis and photosensitisation in dog. 04
6. Write down treatment procedure for the following diseases: 4×02 = 08
  - a. Pododermatitis
  - b. Feline acne
  - c. Seborrhoea
  - d. Flea infestation
7. Write short notes (any two) on: 2×04 = 08
  - a. Rabbit syphilis
  - b. Demodecosis in a dog
  - c. Drug hypersensitivity
  - d. Lumpy wool in sheep