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

Subject: **Zoo, Wild and Lab. Animal Anaesthesia**

Course code: ZWL 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) Compare the beneficial and adverse effects of use inhalable and injectable anesthetics in animals. 02
   (b) What are the useful facts for Isoflurane, Halothane and Sevoflurane for using in wild animals? 06
   (c) Mention the vapour pressure (mm Hg), induction (%) and maintenance (%) of above mentioned gaseous anesthetics for wild animals. 02

2. (a) How will you select suitable Endo- tracheal (ET) tube and rebreathing bag for anesthesia in zoo animals? 04
   (b) What is MAC value, why is it useful? 03
   (c) What are the advantages to the use of nitrous oxide in veterinary patients? 03

3. (a) What equipment is available to facilitate remote delivery of anesthetic agents? 03
   (b) What types of darts are available to facilitate drug delivery in zoo and wildlife practices? 03
   (c) What anesthetic technique should be used on the bear? 04

4. (a) Enumerate the anatomic and physiologic peculiarities in the avian respiratory system that will have an impact on anesthesia? 04
   (b) Fasting before anesthesia is highly recommended in birds—explain why? 02
   (c) In large birds weighing more than 15kg, mainly the ratites, what are the most commonly used induction techniques? 04

5. (a) Do ruminants need to be sedated or treated with an anticholinergic prior to induction of anesthesia? 04
   (b) Explain the difficulties of Endo-tracheal intubation in ruminants? 03
   (c) What types of fluids should be administered during anesthesia? 03

6. Write short notes on ***any two*** of the followings- 2x5=10
   a) Normal values for anesthetized ruminants
   b) Capture myopathy
   c) CPCR in wild animals
   d) Importance of Capnograph

Chittagong Veterinary and Animal Sciences University
Faculty of Veterinary Medicine
Department of Medicine and Surgery
MS in Theriogenology Final Examination 2019
Semester: January- June
Course title: **Advances in Obstetrics (Theory)**
Course Code-ADO-601, Credit: 2
Total marks: 40, Time: 2 hour

(Answer any eight questions which have equal marks five)

1) Define Theriogenology and Theriogenologist. Its importance in livestock sector for achieving Sustainable Development Goals (SDGs) in Bangladesh.

2) A 4 years old cow previously grazing in open field now admitted at TVH with the history of anestrous, predict the possible causes with their diagnosis.

3) How will you measure the time of parturition by observing clinical sign in cow doe mare bitch queen?

4) Develop a plan for the termination of pregnancy in bitch, cow and doe during early, mid and late gestation period.

5) Classify with example the pregnancy safety drug in different category recommended by The Food and Drug Administration (**FDA**).

6) Interpret the peri-parturient events that are commonly occurring in cow.

7) How will you manage any types of dystocia in cow?

8) Choose the drugs and instruments that are require for dystocia management kit box to attend any types of emergency obstetrical cases.

9) Write down the clinical management of the following obstetrical conditions(any two): a) Dog sitting position b) Lateral deviation of head of fetus in cows c) Breech presentation in a mare

10) Write down the clinical management of the following condition(any two):
a. Abortion b. Retain placenta c. Vaginal prolapse

Chittagong Veterinary and Animal Sciences University
Faculty of Veterinary Medicine
Department of Medicine and Surgery

MS in Theriogenology Final Examination, 2019

Subject: Reproductive Hormones

Course Code: RDH-601

Total Marks: 40

Time: 2 hours

Answer any five of the following questions. Figure in the right margin indicate full marks.

1.	What importances of reproductive hormone in livestock? Discuss briefly in Bangladesh interest.	8
2.	How reproductive system is controlled by nervous and endocrine mechanism? Describe briefly.	8
3.	How hormone acts to enhance the reproduction in animal body? Make an example by your understanding.	8
4.	A dairy farm located in Chottogram having 500 dairy cattle. Farm management reported 40% infertility of that farm and it is a most vulnerable issue to dairy development. As you are a veterinarian asked to improve fertility rate of this dairy farm. How? Describe briefly.	8
5.	Classify the hormone according to their biochemical nature.	8
6.	Write down the biosynthesis of steroid and fatty acid hormone?	8
7.	Apply the following hormones; GnRH, PGf2α, P_4, FSH, and LH in different clinical cases as prescription format.	8
8.	Write short note on i. Transportation of hormone ii. Principles of hormonal therapy in veterinary practices	2x4 =8

Chittagong Veterinary and Animal Sciences University
Department of Medicine and Surgery
MS in Epidemiology January-June Semester Final Examination, 2019
Course Title and Code: *Principles of Epidemiology (PRE: 2+0)*
Total marks: 40; **Time**: 2 hours

[Answers all questions and right margin indicates full marks]

Scenario-1: Leptospirosis is a bacterial disease caused by Gram -ve, saprophytic spirochetes in the *Leptospireceae* family. The most common cause of leptospirosis in cattle worldwide is the *Hardjosero – var,* for which humans are incidental hosts. *Leptospira* colonizes the kidneys of carrier animals and is shed in urine, which is the primary source of environmental contamination. Animals and humans become infected by exposure of a skin cut or mucous membrane abrasion to contaminated urine, mud, soil, or surface water (rivers, lakes, or ponds). As maintenance hosts, cattle infected with leptospirosis rarely show signs of clinical infection, but they can shed *Leptospira* for a long period of time as long as six months. In pregnant cattle the bacteria can also cross directly from the genital tract to the placenta and infect the fetus, which could have a primary or secondary role in abortion. There is no available published study on Leptospirosis in cattle at different level in Bangladesh. Therefore, an epidemiological study is required to know the status of the disease and its distribution.

Based on the above background information answer the following questions:

Q1.1. Find out the outcome variable and describe it. **(Points 2.0)**

Q1.2. Enlist the exposure variables and classify them. **(Points 2.0)**

Q1.3. Kind of measures of disease frequency you will consider? What are the pre-requisites of your chosen measure of the disease frequency? Use some example figures to calculate the measure along with its interpretation. **(Points 3.0)**

Q1.3. Type of distribution of the estimate you will be able to calculate? Describe different kind distributions of a disease or outcome and write their implications. **(Points 3.0)**

Scenario-2: A snapshot investigation of anaplasmosis in goats of different zones of Chittagong Metropolitan city reveled 100 cases of 2000 goats during rainy season in 2018. Distribution of cases was as follows: 20 cases in Black Bengal goats (N=1000), 40 cases in Jamnapari goats (N=400) and the rest of the cases in cross-bred goats (N=600). ***According to the said information answer the following queries.***

Q2.1. Calculate and interpret the measure of disease frequency as appropriate and differentiate it from other measures of disease frequency. **(Points 3.0)**

Q2.2. Construct **2 by n** table and calculate and interpret the measure of effect as appropriate and distinguish it from the other measures of effect. **(Points 4.0)**

Q2.3. Other than the measure of effect what other parameters you will consider to qualify a risk factor/protective factor as significant. **(Points 3.0)**

Scenario-3: Let's say you would like to conduct an epidemiological study in a livestock population where the population structure is so fragile and communication is so difficult.

Q3.1. What kind sampling strategies will you consider? And why? Compare your chosen sampling approaches with others in terms of advantages and disadvantages. (**Points 8.0**)

Q3.2. When do you apply snow ball sampling? (**Points 2.0**)

Scenario-4: You have determined potential risk factors associated with a disease under investigation by using an appropriate statistical model. Now, you like to causally interpret the results.

Q4.1. What are the criteria you will follow to ascertain each of the potential factors as causally associated with the disease? Explain those criteria. (**Points 10.0**)

Chittagong Veterinary and Animal Sciences University
Department of Medicine and Surgery
MS in Epidemiology January-June Semester Final Examination, 2019
Course Title and Code: *Research Methodology (REM: 2+0) (Theory)*
Total marks: 40; **Time**: 2 hours

[Answer all questions and right margin indicates full marks]

Problem 1: A local veterinarian found an unusual case of calf in a dairy farm in Lohagara with high temperature, anuria, shivering, reluctant to move and off-feed for the last 2 days, but the calf died in the following day. ***In this circumstance,***

Q1.1. What kind of epidemiological investigation will you conduct? Describe your chosen study and find the differences from other epidemiological studies you have learned during the semester? (**Points 5**)

Problem 2: A series of mortality cases were noticed on migratory birds in Tanguar Hoar (Sunamganj) during the past week in February 2018. The department of wildlife and the livestock services jointly requested CVASU epi team to investigate the event and submit a report.
Q2.1. How will you proceed on for an epi investigation? What kind of study will you conduct without considering healthy migratory birds? Write down the advantages and disadvantages of your chosen study from the other commonly available epidemiological studies? (**Points 5**)

Problem 3: Feline panleukopenia is a highly contagious, often fatal viral disease, affecting domestic and wild felids. The prevalence of FPL in Bangladesh is 7.5% in cats. The disease is clinically manifested by severe depression, vomiting, dehydration, enteritis and diarrhea. The highest morbidity and mortality occurs in kittens up to 12 months of age. Mortality is 25–90% in acute panleukopenia and up to 100% in peracute infections. A marked decrease in circulating white blood cells has been recorded. ***CVASU Dhaka Pet Hospital has an excellent paper-based recording system and the Director of the hospital wants to explore potential factors associated with the occurrence of FPL to offer better management services along with the treatment of FPL clinical cases to the clients.***

Q3.1. What would be the suitable epidemiological study design in this request? And why? (**Points 2**)
Q3.2. Describe your chosen study design in a schematic diagram? (**Points 8**)
Q3.3. State the sampling schemes you will apply in your chosen study and write down the potential reasons for those schemes. (**Points 5**)
Q3.4. Enlist potential biases in the chosen study design and how you will deal with those. (**Points 5**)
Q3.5. Show the analytical plan of the data set obtained through your chosen study. (**Points 5**)

Problem 4: Assess and interpret the outputs in the table below

Example	Crude risk ratio	Risk ratio (Stratum1)	Risk ratio (Stratum 2)	Adjusted risk ratio	Interpret the results (Q4.1) (Points 5)
Ex-1	3.0	3.0	3.0	3.0	
Ex-2	3.0	2.0	2.0	2.0	
Ex-3	3.0	0.8	5.5	-	

Chattogram Veterinary and Animal Sciences University
MS in Medicine
January-June Semester-2019
Subject: Zoonotic Medicine (ZOM-601), Total marks: 40, Time-2 (two) hours

*(Figure in the right margin indicates full marks. Answer any **FIVE** questions)*

01 a. Define zoonoses and veterinary public health. Briefly describe role of veterinary public health in zoonotic control. 4.0

02 a. What is bioterrorism? Briefly describe causal agent, mode of transmission and risk factors of important bioterrorism disease risk to the public and national security. 4.0

b. What is reservoir? Briefly explain the global reservoir of rabies. 4.0

c. What are the best ways to prevent the rabies in existing veterinary public health system of Bangladesh? 4.0

03 a. Write down the zoonotic significance of following diseases. 4.0
i. Salmonellosis ii. Leptospirosis iii. FMD and iv. Brucellosis

b. Which campylobacter species are the leading causes of human diarrhea? Briefly discuss the clinical signs, diagnosis and treatment procedures of campylobacter infection in animal and human. 4.0

04 a. What do you mean by emerging and re-emerging disease? Make a list of emerging and re-emerging diseases with zoontic significance. 4.0

b. What are the three most common species of mycobacterium? Briefly explain XDR and MDR TB. 4.0

05 a. List important protozoal and fungal zoonoses with their causal agent. 3.0

b. Describe the mode of transmission, clinical signs and diagnostic procedures of AI in human and animal. 5.0

06 Write short notes on 2x4=8

a. Parasitic zoonoses

b. Food born zoonoses

"GOOD LUCK"

Chattogram Veterinary and Animal Sciences University
Faculty of Veterinary Medicine
Department of Medicine and Surgery
MS in Medicine
Semester: January-June 2019
Subject- Avian Medicine
Course code: AVM-601
Total marks – 40
Time – 2 (Two) hours

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

1. (a) Differentiate between Infectious bronchitis and Infectious laryngotracheitis. **04**

   (b) Explain Cannibalism. Describe the form of Gout predominant in chickens. 02+04= **06**

2. Write down the etiology, clinical signs, postmortem lesions, treatment, prevention and control of Duck plague. **10**

3. (a) Differentiate between Ulcerative enteritis and Necrotic enteritis. **04**

   (b) Write down the postmortem lesions of Infectious bursal disease, Brooder pneumonia and Chicken infectious anemia. **06**

4. Write down the etiology, clinical signs, postmortem lesions, treatment, prevention and control of Newcastle disease in chickens. **10**

5. (a) Write down the clinical signs of EDS76, Fowl cholera and Avian influenza. **06**

   (b) Name four granulomatous/nodular diseases in poultry. Write down the line of treatment of Fowl typhoid and Mycoplasma-colibacillosis complex. 01+03= **04**

6. Write short notes on Mycotoxicosis and Ascites in chickens. **10**

Chattogram Veterinary and Animal Sciences University
Faculty of Veterinary Medicine
Department of Medicine and Surgery
MS in Medicine
Semester: January – June' 2019
Subject: Production Diseases of Dairy Animals
Course Code: PDD 601, Credit: 02
Total Marks: 40
Time: 02 (Two) Hours

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

1. Describe the etiology, risk factors, clinical signs, diagnosis, treatment, prevention and control of Milk Fever in cows. **10**

2. Write down the etiology, risk factors, clinical signs, diagnosis, treatment and control of Transport Tetany in ewes. **10**

3. Describe the etiology, clinical signs, diagnosis, treatment, prevention and control of Lactation Tetany in mares. **10**

4. Define Fatty Liver Disease in cattle. Describe the etiology, clinical findings, lesions, treatment, prevention and control of Fatty Liver Disease in dairy cows. **01+09= 10**

5. Describe the synonyms, etiology, clinical findings, lesions, diagnosis, treatment, prevention and control of Pregnancy Toxemia in ewes under field condition. **10**

6. Write down the etiology, risk factors, clinical signs, diagnosis, treatment and control of Sub – clinical mastitis in does. **10**

- GOOD LUCK -

Chattogram Veterinary and Animal Sciences University
MS in Medicine
January-June Semester-2019
Subject: Food Animal Medicine (FAM-601), Total marks: 40, Time-2 (two) hours

*(Figure in the right margin indicates full marks. Answer any **FIVE** questions)*

01	a.	Define food animal medicine. List five important diseases of each species of food animal commonly found in Bangladesh with their causal agent and brief epidemiology.	4.0
	b	List gastrointestinal nematodes of food animal. Briefly describe the clinical findings, diagnosis and treatment of ascariasis in buffalo calves.	4.0
02	a.	What are the common viral diseases of sheep and goat? Briefly describe the treatment protocol against viral diseases usually followed in SAQTVH with justification.	4.0
	b.	What would be the line of treatment and prognosis of following diseases? Suggest drugs with their generic doses and trade name. i. Anaplasmosis in sheep ii. FMD in cattle	4.0
03	a.	What causing abortions in food animal? Briefly describe the clinical manifestations, diagnosis and treatment of brucellosis in cattle.	4.0
	b.	List causes of neonatal gastroenteritis in ruminant? How will you differentiate them clinically? Make a protocol for the treatment of calf diarrhea.	4.0
04	a.	Make a list of anthelmentics found in Bangladesh with their doses and rout of administration.	3.0
	b.	Define mastitis. Briefly describe the steps of control program of mastitis in large dairy farm of Bangladesh.	5.0
05	a.	What are the common causes of lameness in cattle? Enumerate the etiology, clinical signs. diagnosis and treatment of foot rot in cattle.	4.0
	b.	Name the vaccines with their schedules, doses, routes and duration of interval practiced in cattle of Bangladesh.	4.0
06		Write short notes on (any two) (a) Ephemeral fever in cattle (b) PPR in goat (c) Dermatophytosis in cattle	4x2=8

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 different diagnosis associated with jugular distention? 04
   (c) When would one consider pericardial effusion drainage simply by paracentasis? List some advantages and disadvantages of paracentasis. 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 anesthesia? What are the effects of isoflurane and sevoflurane anaeshesia 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. Prostitis

   iii. Anorchism and monorchism

4. a. Enlist the risk factors associated with testicular generation 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