

Chittagong Veterinary and Animal Sciences University

Department of Medicine and Surgery

MS in Epidemiology January – June Semester Final Examination, 2018

Course Title and Code: Research Methodology (PRE-601: 2+0)

Total marks: 40

Time: 1.5 hours

REM

[Answer all questions. Figures in the right margin indicate full marks]

Scenario-1: Haemorrhagic Septicaemia (HS) is an important infectious disease in large ruminants in Chittagong. A significant number of animals annually die due to HS. Antibiotics are used to treat HS, but the success rate is very poor. Vaccination against HS is also commonly practiced; however the vaccine failure is frequently occurred. In these circumstances, the District Livestock Officer (DLO), Chittagong seeks epidemiological investigations on HS to get potential solution to prevent future HS in cattle. According to this background answer the following questions:

- Q1.** Design three major epidemiological study designs in sketches with their respective objectives. **(Point 10)**
- Q2.** Can you set any intervention study based on the scenario given? If yes, how will you design and what for? **(Point 5)**
- Q3.** What are the basic differences between *observational and non-observational studies* **(Point 3)**; *descriptive and analytical studies*. **(Point 3)**
- Q4.** What are the potential errors that can be aroused in different epidemiological studies during design and implementation stages? **(Point 3)** and how will you deal with those errors? **(Point 3)**
- Q5.** What are the assumptions you should consider to calculate sample size for estimating prevalence of HS in cattle at herd level in Chittagong? **(Point 3)** and calculate the sample size with some example assumptions. **(Point 3)**
- Q6.** Kind of sampling techniques you would like to use to recruit the sampling units for conducting your preferred studies. **(Point 3)** and write down the merits and demerits of different sampling techniques. **(Point 4)**

Chittagong Veterinary and Animal Sciences University

Faculty of Veterinary Medicine

Department of Medicine and Surgery

MS in Medicine

Semester: January – June' 2018

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. (a) What do you mean by Production Diseases in Dairy Animals? **02**
(b) Mention 06 (Six) Production Diseases in Dairy Animals. **02**
(c) How would you diagnose, treat and prevent Ketosis in a pregnant cow? **06**
2. Describe the etiology, risk factors, clinical signs, diagnosis, treatment, prevention and control of Milk Fever in cow. **10**
3. (a) Define parturition. Write down the parturition of bovine along with the function of relevant hormones. **01+04=05**
(b) Describe the reproductive hormones in dairy cattle with their mode of action. **05**
4. Define Downer cow syndrome. Write down the etiology, clinical findings, lesions, treatment, prevention and control of Downer cow syndrome in relation to Animal Welfare Considerations. **01+09= 10**
5. Define Fatty Liver Disease in cattle. Write down the etiology, clinical findings, lesions, treatment, prevention and control of Fatty Liver Disease in Dairy Cows. **01+09= 10**
6. Write short notes on any two of the followings: **02 X 05 = 10**
 - (a) Pregnancy toxemia in ewes.
 - (b) Sub – clinical mastitis in does.
 - (c) Grass tetany in cows.

- GOOD LUCK -

Chittagong Veterinary and Animal Sciences University
Faculty of Veterinary Medicine
Department of Medicine and Surgery
MS in Medicine
Semester: January-June 2018
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) Describe salmonellosis in chicks and layer birds. **08**
(b) Name ten *E. coli* diseases in poultry. **02**
2. Write down the etiology, clinical signs, postmortem lesions, treatment, prevention and control of infectious bursal disease. **10**
3. (a) Differentiate between two tumor forming viral diseases of chickens. **05**
(b) Distinguish between infectious bronchitis and infectious laryngotracheitis? **05**
4. Write down the etiology, clinical signs, postmortem lesions, treatment, prevention and control of duck viral enteritis. **10**
5. (a) Which subtypes of Avian influenza are highly pathogenic for chickens? **01**
(b) Write down various pathotypes, their clinical signs and postmortem lesions, treatment and prevention of Newcastle disease in chickens. **09**
6. Describe bumble-foot disease and necrotic enteritis in chickens. **10**

Chittagong veterinary and Animal Sciences University
Department of Medicine and Surgery, Faculty of Veterinary Medicine
MS in Medicine, January-June Semester-2018
Subject: Zoonotic Medicine (ZOM-601), Total marks: 40, Time-2 hours

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

- Q1 a. Define zoonoses. Why veterinarians are prone to get infection with zoonotic diseases? What are the ways to help prevent getting zoonotic diseases? 4.0
- b. Write down the pathognomonic clinical signs for diagnosis and drug of choice for treatment of following zoonotic diseases. 4.0
- i. Brucellosis ii. Cryptosporidiosis iii. Dermatophilosis and iv. Toxoplasmosis
- c. List the bacterial food born zoonoses? Mention common sources of transmission and common clinical symptoms in human. 2.0
- Q2 a. What are bioterrorism diseases? List the bioterrorism diseases with highest risk to the public and national security. 3.0
- b. What kind of diseases does anthrax causes in man and animal? What are risk factors associate with anthrax infection? 3.0
- c. Name the most common fungal zoonoses. What is its common name and causal agent? Briefly describe the diagnostic and treatment procedures of it. 4.0
- Q3 a. What zoonoses causing nervous disorders in animal? How will you differentiate rabies, pseudorabies and BSE clinically? 3.0
- b. Write down the important clinicopathological findings which most likely point the diagnosis of following diseases. 4.0
- i) Leptospirosis ii) Q fever and iii. Listeriasis
- c. Which salmonella serovars have zoonotic potential? How they transmit? What are causes both man and animal? 3.0
- Q4 a. List milk borne zoonoses. Briefly describe the control measures of it. 4.0
- b. What are the three most common species of Mycobacterium? What tuberculosis vaccine called and why is it not always used? 2.0
- c. What are the three forms of rabies? What sequential steps you would like to follow in controlling rabies in animals and humans? 4.0
- Q5 Write short notes on any two 2x5=10
- a. Gastrointestinal zoonoses
- b. Birdflu
- c. kalazar

“GOOD LUCK”

Total marks: 40

Time: 2 hours

[Answer all questions. Figures in the right margin indicate full marks]

Scenario-1: A cross-sectional study was conducted on randomly selected 129 rural households and 245 chickens for both the sero-prevalence and active infection rate of rural chickens in Anowara and Rangunia of the Chittagong district during June and July of 2017. ELISA was used for the detection of NDV antibodies in which positive samples were then confirmed with HI testing. Cloacal samples were then analysed for the presence of NDV RNA using one-step RT-PCR. A pretested questionnaire took the following information regarding households sampled: chicken and duck population size; household type (mixed versus single farming) and location; bird ages, sex, breed, and vaccination status against NDV. Data were also collected on Farmers' socio-economic status such as education level and primary sources of income. Data on household management practices included source of chicken feed, proximity to commercial poultry farms, poultry housing type, cleaning practices, litter and dead chicken disposal, and primary challenges to poultry farming. **Based on the given scenario answer the following queries:**

Q1. Find and explain the variables of exposure and outcome. **(Point 2)**

Q2. Work out to identify possible confounding and interaction variables and briefly describe those. **(Point 5)**

Q3. What would be an appropriate measure of disease frequency and why? Are you able to calculate your preferred measure with the given information? How will you distinguish your chosen measure from the other measures of disease frequency? **(Point 8)**

Scenario-2: Information in the table below is taken from a submitted script of "Risk factors therapeutics of Peste des Petits Ruminants in goats, Veterinary Hospital-based Case-Control Bangladesh" to the Journal of Preventive Veterinary Medicine

Factor	Category	PPR Positive/Total tested (%)	P
Year	2011	151/713 (21.2)	0.012
	2012	177/763 (23.2)	
	2013	188/728 (25.8)	
	2014	196/752 (26.1)	
	2015	210/732 (28.7)	
Season	Winter	166/646 (25.7)	<0.001
	Summer	151/1296 (11.7)	
	Rainy	605/1746 (34.7)	
Rearing system	Intensive and semi-intensive	793/2424 (32.7)	<0.001
	Free range and tethering	120/1229 (9.8)	
Breed	Black Bengal	294/1059 (27.8)	0.015
	Jamunapari and cross	628/2629 (23.9)	

Q.4. Interpret the proportionate prevalence of PPR in goats by different factors. (Point 3)

Q5. Calculate and interpret appropriate measures of effect. (Point 8)

Q6. Can you calculate measures of impact and measures of population impact based on the information in the table? Justify your answer. (Point 4)

Scenario-3: A storm of abortion was recorded in certain dairy cattle farms in Chittagong during the last week. The investigation team has confirmed the outbreak which was caused by *Leptospira hardjo*.

Q7. What measure will you consider to assess the magnitude of the outbreak? (Point 3)

Q8. Are you able to calculate "Basic Case Reproduction Number" and "Net Case Reproduction Number" in the outbreak situation? (Point 5) and what are the implications of these? (Point 2)

Chittagong Veterinary and Animal Sciences University
Faculty of Veterinary Medicine
Department of Medicine and Surgery
MS in Medicine Final Examination' 2018
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 importance of skin disease management in veterinary practice. 04
b. Define primary and secondary skin diseases. Give five examples of each. 04
2. a. How can you diagnose skin disease of animals? 04
b. Write down 10 skin disorders of dog. 04
3. Differentiate: hyperkeratosis from parakeratosis, folliculitis from impetigo, nodules from vesicle, wart from tumour 08
4. a. What are the skin samples you will collect in parakeratosis, mange, folliculitis and impetigo? What tests will you do and what will be findings? 04
b. List 10 commercially available drugs used only for skin disorders. 04
5. a. Define photosensitisation. How can you diagnose photosensitisation in cattle? 04
b. Write down the remedial procedure of a photosensitised cow. 04
6. Write down treatment procedure for the following diseases: 4×02 = 08
 - a. Ringworm
 - b. Allergic dermatitis
 - c. Parakeratosis
 - d. Tick infestation
7. Write short notes (any two) on: 2×04 = 08
 - a. Contagious ecthyma in goat
 - b. Yeast dermatitis in a dog
 - c. Lice infestation in pigeon
 - d. Lumpy wool in sheep

M.S. in Surgery; January-June Semester-2018
Subject: Zoo, Wild and Lab Animal Anaesthesiology (Theory)

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) Mention five modern gaseous anaesthetic those are suitable for Lion anaesthesia. 02
(b) Write down the mechanism of action for inhalant anaesthetic. 05
(c) How will you consider MAC value for the Birds and reptiles? 03
2. (a) What are the basics for monitoring of anaesthesia? 03
(b) What is the importance of capnography during gaseous anaesthesia in wild animals? 04
(c) What are the relation and impact of hyperthermia during wild life capture? 03
3. (a) What are the signs of airway obstruction? 03
(b) How will you maintain airway during anaesthesia of zoo animals? 07
4. (a) What are the possible sources of oxygen for oxygen therapy in wild animals? 04
(b) Write down the principles of pain management in animals. 04
(c) Mention the drug groups with examples, which act as a pain killer in animals. 02
5. (a) Write down a checklist of immobilizing drugs for capture of a wild animal. 03
(b) Briefly describe the different types of dart used in zoo animal practices. 05
(c) Write down the treatment of capture myopathy in wild animals. 02
6. Write short notes on *any two* of the followings- 2x5=10
 - (a) CPR
 - (b) Antivenom
 - (c) Endotracheal intubation in ruminants
 - (d) Mechanism of drug delivery in blow darts

M.S. in Surgery; January-June Semester-2018

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) Differentiate between the cosmetic and plastic surgery. 02
(b) Briefly describe the different stages of wound healing in large animal surgery. 05
(c) What are the common surgical affections of gastro-intestinal system in ruminants?
How will you treat a cow suffering from left sided abomasal displacement? 03
2. (a) Mention the name of common antiseptics with concentration used in large animal surgery. 03
(b) How will you prepare the surgical site for abdominal surgery in large ruminants? 04
(c) Briefly describe the postoperative medication for large animal surgery. 03
3. (a) How will you perform a dermoid surgery in a Holsten Friesian cow? 03
(b) Write down the etiology, clinical signs, diagnosis and treatment for umbilical hernia in a calf. 05
(c) What are the merits and demerits of oblique para-lumbar incision for C-section in large animals? 02
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 anaesthesia? 03
(b) How will you repair a chronic vaginal prolapse in cows? 04
(c) Explain episiotomy practiced for large animal surgery in the field. 03
5. (a) Draw a normal anatomy of the cow's teat. What are the common causes of teat obstruction in cow? 04
(b) How will you correct a blind teat in a cow? 03
(c) How will you perform surgery for hematoma of the penis in Bulls? 03
6. Write short notes on *any two* of the followings- 2x5=10
 - (a) Punch-skin grafting
 - (b) Laparoscopic cryptorchidectomy
 - (c) Trimming of claws in cattle
 - (d) Septic arthritis in large animal

Chittagong Veterinary and Animal Sciences University
Faculty of Veterinary Medicine
Department of Medicine and Surgery
MS in Surgery, Semester: January-June, 2018
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. Write in detail the patient preparation for anaesthesia and surgery in different animals. 10.0
2. Mention the types of anaesthesia and describe the mode of action of local anaesthetics and their important properties. 10.0
3. Why GA is usually not consider for large animals? Describe different nerve blocks for facial and limb regions with indications in ruminants. 10.0
4. Mention different parts of inhalation anaesthetic machine and ET with intubation technique. Why inhalation anaesthesia is more advantages than injectable anaesthesia. What are the types/ methods of application inhalation anaesthesia? 10.0
5. Why anaesthetic records are important? Explain anaesthetic recording system. What are the indications of muscle relaxant in large animals? 10.0
6. Write short notes on ventilation technique and anaesthetic immunology. 10.0

Chittagong Veterinary and Animal Sciences University
Faculty of Veterinary Medicine
Department of Medicine and Surgery
M. S. in Surgery, Semester: January-June, 2017
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. How will you analyze the fracture healing? Write down the fracture healing process. What is the bone healing time according to age? 10.0
2. Define fracture with different classification and causes of fracture. Draw and describe the blood circulation of bone. 10.0
3. Enlist the major orthopaedic problem in dogs and cats. Describe the detail orthopaedic examination procedure and test in some special clinical conditions. 10.0
4. Mention the special orthopaedic instruments, appliances and implants used for orthopaedic surgery. What are the reduction and immobilization techniques used for fracture correction. 10.0
5. Write down the components of connective tissues in joints. Draw and level the synovial joints. Classify joint diseases. Describe the medical and surgical management of arthritis in dogs. 10.0
6. How will you differentiate a dog suffering from hip dysplasia and hip dislocation? Write down the surgical correction of both conditions. 10.0

Chittagong veterinary and Animal Sciences University
Department of Medicine and Surgery, Faculty of Veterinary Medicine
MS in Medicine, January-June Semester-2018
Subject: Food Animal medicine (FAM-601), Total marks: 40, Time-2 hours

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

- Q1 a. What causes joint ill? How will you treat a patient of joint ill? What good practices you may suggest to prevent the joint ill in lamb? 4
- b. Seven years old cross bred cow was brought to SAQTVH, CVASU with a history of sneezing and bilateral muco-purulent nasal discharge. Primary examination of nasal mucosa showed partial obstruction of the nasal cavity. Diagnose this case in a systemic manner and give the treatment. 3
- c. List important parasitic diseases of farm animal. Mention the general prevention procedures of them. 3
- Q2 a. What is paratuberculosis? Why it named Johne's disease? Which disease has resembled with johne's in human? How is paratuberculosis transmitted and spread? 4
- b. Briefly describe the causal agent, transmission procedures, and diagnosis and treatment protocols of brucellosis in cattle. 4
- c. Write down the prognosis and post infection complications of following diseases. 2
i. FMD ii. PPR iii. Mastitis and iv. Ephemeral fever
- Q3 a. What do you mean by mucosal disease? Briefly describe the clinical manifestations, diagnosis and treatment of mucosal disease in cattle. 4
- b. Write down the common treatment procedures of contagious ecthyma and cowpox in ruminant. 3
- c. List the causes of neonatal diarrhea in ruminant? How will you differentiate them clinically? 3
- Q4 a. What are the possible routes of disease transmission in animal? List the vector borne diseases in ruminant. 2
- b. Briefly describe the trypanosomosis of food animal with emphasis on diagnosis and treatment. 4
- c. What is black disease in sheep? What is the role of liver fluke in black disease? Write a prescription of goat plague. 4
- Q5 a. What are the common causes of lameness in cattle? Enumerate the etiology, clinical signs, diagnosis and treatment of foot rot in cattle. 4
- b. Name the vaccines with their schedules, doses, routes and duration of interval practiced in cattle of Bangladesh. 4
- c. Do the differential diagnosis of following diseases. 2
i. Clinical and subclinical mastitis ii. Dermatophytosis and dermatophilosis

Good Luck