

**M.S. in Surgery; July-December Semester-2018**

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

Course code: SAS-602

**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** of the following questions)*

1. (a) What are basic surgical facilities should be included to design a modern veterinary hospital? 04
- (b) Explain design and services of a “recovery room” of surgery unit in veterinary hospital. 03
- (c) How will you classify the surgical procedure to maintain the lowest level of contamination in the clean theatre? 03
2. (a) Explain sterilization, disinfection, antisepsis, asepsis, cleaning and sanitation. 03
- (b) Write down the merits and demerits of both physical and chemical methods of sterilization. 04
- (c) Mention the advantages and disadvantages of various packaging materials used during sterilization. 03
3. (a) Mention atleast 7 absorbable and 7 nonabsorbable suture materials used in small animal surgery 04
- (b) Differentiate the properties and use of Polyglycolic acid, Polyglactin 910 and Polydioxanone suture materials that commonly used in small animal surgery. 04
- (c) Explain the causes and treatment of oesophageal stricture in animal. 02
4. (a) Describe endogenous and exogenous sources of wound contamination in animal. 02
- (b) How will you classify the wounds according to the clinical appearance? Briefly describe the maturation phases of wound healing. 05
- (c) Explain volvulus, torsion and intussusceptions in animal. 03
5. Write short notes on *any two* of the followings:- 2x5=10
- (a) Urolithiasis in dog
- (b) Common tubes used in veterinary surgery
- (c) TPLO surgery in dog

Chittagong Veterinary and Animal Sciences University  
MS in Epidemiology  
July- December, 2018  
Subject: GIS and Molecular Techniques in Epidemiology  
Course code: GMT-602

Total marks: 40; Time: 2 hours

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

- 1 a What is gene sequence? Explain Sanger's sequence mechanism for elucidating unknown sequence. 5.0
- b What do you mean by positive selectable marker and negative selectable marker? How does it help for production of gene knockout mice? 5.0
  
- 2 a Define gene cloning. 1.0
- b Mention steps for gene cloning. 2.0
- c What do you mean selectable markers and insertional inactivation? Explain how these process helps in identifying right plasmid containing desired insert 7.0
  
- 3 a Define PCR 1.0
- b What are the essential requirements of PCR process? 2.0
- c Explain the different steps of PCR processes. What consideration will you take in choosing primer for amplifying a template? 7.0
  
- 4 a What is the framework for spatial data analysis? Write down the importance of spatio-temporal analysis. 3.0
- b Differentiate between vector data and raster data. 4.0
- c What do you mean by the term Kernel smoothing? Briefly describe the edge effect of spatial data 3.0
  
- 5 a Explain transcription and translational process in eukaryotes and differentiate it from eukaryotes 5.0
- b Explain extraction and purification of nucleic acids 5.0

# Chittagong Veterinary and Animal Sciences University

Department of Medicine and Surgery

**MS in Epidemiology July-December Semester Final Examination/2018**

**Course and Title: Risk Analysis and Policy Planning (RAP-602)**

**Total marks: 40; Time: 2 hours**

**[Answer three questions of which question no 1 is compulsory. Figures in the right margin indicate full marks]**

- Q1.** (a.) Write the basic components of risk analysis. What are the similarities and dissimilarities between NAS-NRC model and Covello-Merkhofer model? **8**
- (b.) Construct a couple of example risk analysis questions? And outline risk analysis pathway using one of the questions. **8**
- (c.) How does risk analysis help in planning of disease surveillance? **4**
- Q2** (a.) Write down the importance of contingency plans for livestock disease control? **4**
- (b.) Does the Bangladesh Livestock Services have any policy for poultry disease control? If yes, what are main features of that policy? **3**
- (c.) Write down the relationship between disease control programme, strategy and policy. **3**
- Q3.** (a.) How will you structure a poultry value chain analysis? **6**
- (b.) How do the outputs of an anthropological study along with an epidemiological study on a zoonotic disease help farmers in disease controlling? **4**
- Q4.** Suppose your country is at threat of Transboundary Animal Diseases, as an epidemiologist and policy maker what are the strategies you like to take as the preventive measures? Describe briefly. **10**

**Chittagong Veterinary and Animal Sciences University**  
**Faculty of Veterinary Medicine**  
**Department of Medicine and Surgery**  
**MS in Medicine**  
**Semester: July-December 2018**  
**Subject- Pet Animal Medicine**  
**Course code: PAM-602**  
**Total marks – 40**  
**Time – 2 (Two) hours**

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

1. (a) Describe the clinical signs and treatment of infectious canine hepatitis. **06**  
(b) Write the vaccination schedules for dogs and cats? **04**
2. Write down the etiology, epidemiology, clinical signs, diagnosis, treatment, prevention and control of canine parvoviral infection. **10**
3. (a) Write down the clinical signs of canine distemper and canine leptospirosis. **05**  
(b) Panleukopenia- explain why it is fatal in cats and how can you treat it? **05**
4. Write down the etiology, various clinical forms, diagnosis, prevention and control of rabies in pets. **10**
5. (a) Briefly describe the zoonotic significance of toxoplasmosis? **02**  
(b) Write down the etiology, clinical signs, treatment and control of canine heartworm infestation. **08**
6. Write short notes on paracetamol poisoning and respiratory disease complex in cats. **10**

**Chittagong Veterinary and Animal Sciences University**  
**Faculty of Veterinary Medicine**  
**Department of Medicine and Surgery**  
**M.S. in Medicine**  
**Semester: July – December, 2018**  
**Subject: Zoo and Wild Animal Medicine**  
**Course Code: ZWM 602; Credit: 2**  
**Total Marks: 40. Time: 2 (Two) Hours**

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

1. (a) Write down the etiology, transmission, clinical signs, post – mortem lesions, diagnosis, treatment, prevention, control and zoonotic importance of Bacterial Enteritis in Non – human Primates. **07**  
(b) A dead Giraffe from Chittagong Zoo came to you for post – mortem examination. On post – mortem examination, you saw corrugated lesions on ileo – cecal junction. What is your presumptive diagnosis? Write a prescription for the affected Giraffes on that Zoo. **03**
2. Describe the etiology, transmission, clinical signs, post – mortem lesions, diagnosis, treatment, prevention, control and zoonotic importance of Anthrax in Asian Elephant (*Elephas maximus*). **10**
3. (a) Mention in a tabular form the etiology, clinical signs and therapy of 10 (Ten) bacterial diseases in Reptiles. **05**  
(b) Write down the etiology, mode of transmission, clinical signs, post – mortem lesions and treatment of Gray patch disease in Green Sea Turtle (*Chelonia mydas*). **05**
4. Write down the etiology, transmission, clinical signs, post – mortem lesions, diagnosis, treatment, prevention, control, and zoonotic importance of Equine influenza in Zebra at Bangobandhu Sheikh Mojibur Rahman Safari Parak, Dulahazara, Chokoria, Cox's Bazar. **10**
5. (a) Mention the name of upper respiratory tract diseases of the Royal Bengal Tiger. Describe the etiology, routes of infection, clinical signs, diagnosis and treatment of Feline pneumonitis in the Royal Bengal Tiger at the National Zoo, Mirpur, Dhaka. **01 + 05= 06**  
(b) A dead deer of 5 months old came to you with the history of lameness. On post – mortem examination, you saw stripped lesion over myocardium of the heart. What is your presumptive diagnosis? What is your advice to the owner for rest of the healthy ones? **04**
6. (a) Describe the etiology, clinical signs, post – mortem lesions and therapy of Pouch infection in Koala. **05**  
(b) Write down the etiology, clinical signs, post – mortem lesions, treatment and control of Salmon poisoning in Fox. **05**

**- GOOD LUCK -**

Chittagong Veterinary and Animal Sciences University

Faculty of Veterinary Medicine

Department of Medicine and Surgery

MS in Medicine Final Examination 2018

Semester: July - December

**Sub: Fluid Therapy and Blood Transfusion**

Course Code: ~~SDM-601~~ **FBT- 602**

Total Marks: 40, Time: 2 hours

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

1. a. Describe the fluid distribution at different compartments of the body. 04  
b. Write down the role of cell membrane in acid-base-fluid balance. 04
2. a. How can you assess dehydration in animals? 04  
b. How can you calculate amount of fluid needed for resuscitation? 04
3. a. Write down the composition of commercially available fluids with their indications in animals. 04  
b. Differentiate between crystalloid and colloid solutions. 04
4. a. Write down the indications of whole blood and blood component therapy in dog. 04  
b. Write down the selection criteria of a blood donor. 04
5. a. What are the special fluids? Write down the indications of them. 04  
b. Write short note on 'albumin solutions'. 04
6. a. What do you mean by transfusion reactions? Is cross-matching of donor and recipient's blood mandatory before each transfusion? 06  
b. Write down the blood groups of dog. 02
7. Write short notes on: 02×04 = 08
  - a. Ringer's lactate/acetate
  - b. Normal saline

**Chittagong Veterinary and Animal Sciences University**  
**Department of Medicine and Surgery, Faculty of Veterinary Medicine**  
**MS in Medicine, July-December Semester-2018**

**Subject: Food Animal Medicine II (FAM-602), Total marks: 40, Time-2 (two) hours**

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

- 01 a) What are the common poisons that could hurt the farm animal of Bangladesh? 05  
Briefly discuss the urea and nitrate poisoning in cattle.
- b) Define following terms; Impetigo, Wheal, Macule and Parakeratosis. Briefly 05  
discuss the dermatitis caused by infectious agents in food animal.
- 02 a) Write down the Principles of diagnosis of urinary tract dysfunctions. What are 06  
the predisposing factors and common lodgment sites of urolithiasis in goat?
- b) Define acidosis? Classify it. Enumerate the management and sequelae of 04  
acidosis in ruminant.
- 03 a) What is fluid therapy? How will you recognize a dehydrated animal? Write 06  
down the causes and management of dehydration.
- b) Define anemia. Classify different types of anemia. Compose a line of 04  
treatment for severely anemic patient.
- 04 a) How can the origin of hematuria located? What urinalyses are suggestive for 04  
UTI?
- b) Enumerate the differential diagnosis of the following conditions. 06
- I. Hemoptysis and hematemesis
  - II. Hydrothorax and pneumothorax
  - III. Myositis and myopathy
- 05 Write short notes on the following (*any two*) 2\*5=10
- I. Fibrous osteodystrophy in goat
  - II. Conjunctivitis in goat
  - III. Peat scours in cattle

**Good Luck**

**M.S. in Surgery; July-December Semester-2018**  
**Subject: Nuclear Medicine, Radiotherapy and Physiotherapy (Theory)**  
Course code: NMR-602

**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** of the following questions)*

1. a) Define Nuclear Medicine. What are the differences between nuclear medicine and radiology? 03  
b) Illustrate the terminology on Chiropractic, Physiotherapy and Osteopathy? 03  
c) Mention the common radioisotopes used in Veterinary radiology. 04
2. a) Enlist different applications of nuclear medicine in veterinary science. 03  
b) Explain the terminology SPECT and PET used in Nuclear Medicine. 03  
c) Mention the use of ionizing radiation in veterinary science. 04
3. a) Describe radiotherapy and brachytherapy. 03  
b) Briefly explain the phases of planning for radiotherapy 04  
c) How will you use radiotherapy for the treatment of cancer in a dog? 03
4. (a) How does brachytherapy use in animal? 03  
(b) Explain the benefit for use brachytherapy in comparison to other therapy commonly used in nuclear medicine? 03  
(c) Mention some uses of brachytherapy in animals. 04
5. Write short notes on *any two* of the followings:-  
(a) Use of Gamma camera  
(b) Tracers  
(c) Hydro-treadmill therapy  
(d) Massage therapy



Chittagong Veterinary and Animal Sciences University  
Faculty of Veterinary Medicine  
Department of Medicine and Surgery  
MS in Surgery, Semester: July- December, 2018  
Subject: Small Animal Anaesthesiology  
Course Code: SAA. 602; Credit: 2  
Total Marks: 40  
Time: 2 (Two) Hours

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

1. a) What are the advantages for fasting of an animal? 3.0  
b) Explain the objectives and classification of premedication with example. Why we use the following agents as a premedicating agents in small animals. Atropine sulphate, Xylazine and Diazepam. 7.0
2. a) What are the important clinical findings usually observed during different stages of general anaesthesia? 5.0  
b) Write down the monitoring of anaesthesia technique in small animals. 5.0
3. a) If you want inhalation anaesthesia by isoflurane for caesarean section in a 30 kgs dog, how will you do that? Describe in detail. 5.0  
b) Mention the different parts of gaseous anaesthetic machine with their function 5.0
4. a) Write down the general consideration for canine and feline anaesthesia? 5.0  
b) How will you diagnose cardiopulmonary arrest and resuscitate such problem? 5.0
5. a) What are the important factors usually we consider during paediatric and geriatric patients. 5.0  
b) How will you select suitable anaesthesia for thoracic surgery and ocular patients? 5.0
6. Describe the anaesthetic induced stress and immune response in animals. 10.0

Chittagong Veterinary and Animal Sciences University  
Faculty of Veterinary Medicine  
Department of Medicine and Surgery  
M. S. in Surgery, Semester: July- December, 2018  
Subject: Ophthalmic Surgery  
Course Code: OPS 602; Credit: 2  
Total Marks: 40  
Time: 2 (Two) Hours

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

1. What are the importances to know the ocular anatomy in this course? Briefly describe the important features of ocular anatomy specially eyeball, eye lids, cornea, lens and lacrimal apparatus. 10.0
2. Describe the important clinical examinations, diagnostic and imaging tools used for ophthalmic examination in a dog. 10.0
3. a) How the patient controls intraocular pressure? Write down the factors responsible for normal variation in intraocular pressure. Illustrate briefly the important non-surgical and surgical techniques and their objectives for the treatment of glaucoma. 10.0
4. Write down the corneal wound healing process. What are the corneal responses to insult? Briefly describe the common congenital and acquired corneal affections in dog. 10.0
5. Mention the common congenital and acquired conditions of canine lens. Describe the developmental stages and different types of cataract with etiology and surgical treatment. 10.0
6. Describe the common ocular tumor in dog and cat. 10.0

**M.S. in Surgery; July-December Semester-2018**

**Subject: Lameness in Animals (Theory)**

Course code: LAA-602

**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** of the following questions)*

1. (a) Explain how acute laminitis is one of the clinical outcomes of 'grain overload. How will you diagnose and treat subclinical laminitis (SCL) in dairy cow? 05  
(b) Hemorrhages in the sole confirm that SCL exists in the cattle-clarify. 02  
(c) Explain metabolic laminitis in dairy cattle. 03
2. (a) Draw a schematic diagram on important surgical conditions of a bovine digit. 06  
(b) Write the importance of a cow's ability to rest in dairy farming. 02  
(c) Mention the common treatment procedure for long bone fracture in large animals. 04
3. (a) Is hoof trimming important in a dairy cow? Write the etiology, clinical findings, treatment and control of laminitis in animal? 04  
(b) How will you treat or prevent the white line disease from the dairy farm? 0  
(c) What are the causes, symptoms and treatment of foot-rot in cattle? 0
4. (a) Differentiate between toe ulcer and toe abscess. How will you control these diseases in a farm? 0  
(b) Draw a patella with its ligaments in the stifle joint. Describe the treatment of upward fixation of patella in a milking cow. 0  
(c) What are the treatment and prevention of carpal hygroma in cattle? 0
5. Write short notes on *any two* of the followings:- 2x5=10
  - (a) Hip dislocation in animal
  - (b) Hoof deformity in cow
  - (c) Spastic paralysis
  - (d) Arthritis in calf

**Chittagong Veterinary and Animal Sciences University**

**July to December Semester MS Final Examination, 2018**

**Department of Medicine and Surgery**

**MS in Epidemiology**

**Course Title: Animal Health Economics (Theory)**

**Course Title: AHE-602**

**Full Marks: 40**

**Time: 2 hours**

**Answer any four (04) questions from the followings:**

1. a) Define animal health economics. What is the necessity of studying animal health economics as student of veterinary sciences? **3**  
b) Briefly discuss the graphical approach in equilibrium for revenue maximizing combination of product of a firm. **7**
2. a) Distinguish between input and output. Discuss the rules and methods used for calculating output of livestock enterprise. **3**  
b) A layer farm owner started a layer farm by purchasing 1000 matured pullets from a hatchery farm. On average 50 weeks recorded as laying period, 10 % of laying birds died and not replaced during laying period, average egg production per bird recorded as 20 dozens, sold @ Tk. 112 per dozen. At the end of the laying period, remaining hens are culled and sold @ Tk. 280 per hen. **Calculate** annual enterprise output per hen? **7**
3. a) Distinguish between Gross margin and Net farm profitability. Graphically discuss the Break-even analysis. **7**  
b) A Dairy entrepreneur wishes to establish a dairy enterprise keeping 20 Cross-bred milch cows for 5 years period. Each year the farm owner replaces at least 15 % oldest cow of total herd with an in-calf heifer valued at \$ 400. Assumes, each cow yearly produces 1 calf valued at \$ 150, milk produced 2050 liters valued at \$ 0.70 per liter, culled 1 cow being sold at \$ 450. Per cow annual costs of this enterprise for variable factors are recorded as: concentrate feeds valued at \$ 375, insurance \$ 30, green grasses & paddy straw \$ 200, medicine treatment cost valued \$ 75, casual labour and miscellaneous cost \$ 80. **Calculate: Gross margin and net farm profitability of that enterprise.** **3**
4. a) Define prevention and control of animal diseases. Briefly discuss the impact of animal disease in context of Bangladesh. **7**  
b) Write short notes on: i) Whole farm budget and partial budget; ii) Production Frontier; iii) Opportunity cost. **3**
5. a) Distinguish between compounding and discounting. Briefly discuss the methods for economic analysis as an aid to decision making in the field of Animal health. **7**  
b) Five (05) years duration a disease control program to be undertaken for the development livestock production at Hathazari Upazila area in Bangladesh by CVASU. The intended costs and benefits in thousand tk. are as follows:

Year	Costs	Benefits
1	750	-
2	250	250
3	400	750
4	350	1050
5	450	1250

**Estimate: i. BCR and ii. NPV by rate of discount at 15 percent. Also comment on that program.** **3**

**Chittagong Veterinary and Animal Sciences University**

**Faculty of Veterinary Medicine**

**Department of Medicine and Surgery (DMS)**

**July-December Semester Final Examination 2018**

**Sub: Population Health; Code: POH-602**

**Full Marks: 40; Time 2 hours**

**Answer any four (4) from the following questions**

- Q1 a) Describe the benefits of herd health program. 3  
b) Describe historical development of herd health as a core subject of veterinary epidemiology discipline. 7
- Q2 a) What is benchmarking? 1  
b) In our study, we have found bulk milk SCC, 400000 cells/mL of milk in 50% randomly selected dairy farms. By using this value as standard, how will you bench mark SCC in Chittagong? 5  
c) What is HACCP? How can you adjust different steps to implement HACCP in calf rearing in a dairy farm? 4
- Q3 DLS is planning to expand dairy sector in Bangladesh and you are a consultant in this project? How will you take holistic approach in dairy expansion? 10
- Q4 a) Discuss economic aspects of mastitis. 3  
b) Outline the general approach to monitoring and improving udder health. 4  
c) What are the key elements of mastitis biosecurity protocol? 3
- Q5 a) Give outline of an approach to improving herd fertility performance. 3  
b) Evaluate the impacts of lameness in dairy cows. 3  
c) Discuss dairy cow mobility score with behavioral changes and suggestions to improve it. 4

**GOOD LUCK**