

Chittagong Veterinary and Animal Sciences University

MS in Epidemiology

July-December Semester, 2017

GIS and Molecular Techniques in Epidemiology

Course code: GMT-601

Total Marks: 40 Time: 2 hours

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

1	a	Enlist the enzymes required for DNA replication, transcription and translation with their function.	4
	b	Differentiate DNA replication of prokaryote than eukaryote.	3
	c	Explain the purpose of Shine-Dalgarno sequence in translation in prokaryote.	3
2	a	What is the framework for spatial data analysis? Write down the importance of spatio-temporal analysis.	3
	b	What do you mean by the term Kernel smoothing? Briefly describe the edge effect of spatial data.	3
	c	What are the disease clusters? Briefly describe the different types of tests used for spatial clustering.	4
3	a	Explain how does insertional inactivation helps in pUC18 to find out the right clone?	5
	b	How you can you modify blunt end of an insert into sticky end and vice versa with example?	5
4	a	How Sanger's knowledge on DNA replication helps to elucidate unknown sequence of DNA	10
5	a	Role of positive and negative selectable marker in gene knock out mechanism	5
	b	What is genomic library? How can you screen a target sequence from a genomic library?	5

Chittagong Veterinary and Animal Sciences University
Faculty of Veterinary Medicine
Department of Medicine and Surgery (DMS)
July-December Semester Final Examination 2017
Sub: Population Health; Code: POH-602
Full Marks: 40; Time 2 hours
Answer any four (4) from the following questions

Q1	a) What are the objectives of herd health?	2
	b) Describe historical development of herd health as a core subject of veterinary epidemiology discipline.	8
Q2	a) How will you use benchmarking in your dairy herd to solve lameness problem	4
	b) Mention the characteristics of a willing farmer entering into herd health program	3
	c) How a competent veterinarian can convert farmers to a herd health service	3
Q3	Buffalo milk has high milk fat and thus price is double than cow's milk. Moreover buffalo is somewhat resistant to intramammary infection in comparison to cattle. They are also more adaptable in adverse climatic condition. Government is planning to boost up buffalo rearing to meet demand of meat and milk in Bangladesh. How will you take a holistic approach to implement the plan?	10
Q4	Chittagong city corporation authority has contacted epidemiology team of CVASU to know the status of bovine mastitis in dairy farms in metropolitan area. As a herd health veterinarian, develop a questionnaire to know the real situation.	10
Q5	a) Show the flow of data in a herd health program	4
	b) Sketch the pattern of information in an advanced herd health and production program	3
	c) What do you mean by evidence based medicine	1
	d) What is "PICO" in evidence based medicine? Produce an example	2

GOOD LUCK

Chittagong Veterinary and Animal Sciences University

MS July to December Semester Final Examination, 2017

Department of Medicine and Surgery

MS in Epidemiology

Course Title: Animal Health Economics (Theory)

Course Title: AHE-601

Total Marks: 40

Time: 2 hours

Answer any four (04) questions from the followings:

1. a) Define animal health economics. Distinguish between the concepts: i) Economic analysis and financial analysis; ii) MR and MC; iii) Micro and macroeconomics. 5.0
b) Briefly discuss the impact of diseases on food animal production system in context of Bangladesh. 5.0
2. a) What do you mean by productivity and opportunity cost? List down inputs and outputs of livestock production systems. 5.0
b) Describe the economic tools for assessing livestock diseases and their control in context of Bangladesh. 5.0
3. Define break even point. Briefly discuss the break even analysis graphically in context of farm business and production system. 10.0
4. a) What do you understand by gross margin? Distinguish between: i) fixed costs and variable costs; ii) MRS and MRTS. 2.0
b) Briefly discuss the appraisal techniques of livestock disease control and extension service program. 5.0
c) A dairy entrepreneur operates a dairy enterprise keeping with 12 dairy cows for 6 year period. Each year the farm owner replaced two oldest cows from the dairy herd by a calf heifer valued at \$750. If each cow yearly produced a calf valued \$300 and milk 2000 liters valued at \$0.65 per liter, culled 1 cow being sold at \$500. Assume, per cow variable factor costs as: Feeds 7 fodder valued at \$400, medicine & treatment costs valued \$ 150, casual labor costs valued at \$ 100.
Calculate: Per cow Gross Margin and comment on dairy enterprise. 3.0
5. a) Define livestock output. What rules do you follow to calculate output of livestock? 3.0
b) Mention the method for calculating output of a livestock enterprise. 4.0
c) A young entrepreneur operates a goat farming enterprise keeping with 20 adult goats valued at \$100. In a certain year 18 kids are born but 2 dies before end of the year valued at \$20 each and 3 female goats are sold valued at \$120 each, 2 goats are died and 2 female goats received from relatives valued \$110 each and 1 female goat is eaten by a wild dog.
Calculate: Enterprise output and comments. 3.0

Department of Medicine and Surgery

MS in Epidemiology July-December Semester Final Examination/2017

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

Total marks: 40; Time: 2.0 hours

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

- Q1.** (a.) Frame risk analysis giving an appropriate example. 3
(b.) What are the sources of uncertainty in risk assessment? 3
(c.) Write down the relationship between disease control programme, strategy and policy. 4
- Q2.** (a.) Write down the importance of contingency plans for disease control? 4
(b.) What are the ingredients required under the different steps in contingency plan for controlling diseases. 3
(c.) Does the DLS, Bangladesh have any policy for emerging or re-emerging poultry diseases? If yes, how the policy works? 3
- Q3.** Suppose your country is at threat of Transboundary Animal Diseases (TAD), as an epidemiologist and policy maker what are the strategies you like to take as the preventive measures? Describe briefly. 10
- Q4.** Briefly describe the global trends contributing to the emerging animal diseases. 10

M.S. in Surgery; July-December Semester-2017

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 questions)

1. (a) What are the common causes and treatment procedures of Laminitis in animals? 05
What is the role of a hoof trimmer in preventing laminitis?
- (b) Write down the incidence, sign and treatment of Contracted flexor tendon in dairy breeds. 05
2. (a) Draw a schematic diagram on important surgical conditions of a bovine digit. 06
What is the prevalence and severity of heel warts?
- (b) Briefly describe the etiology, incidence, differential diagnosis and treatment of Interdigital necrobacillosis in dairy cattle. 04
3. (a) Describe the trimming method in cow? Write the etiology, clinical findings, treatment and control of interdigital dermatitis of a dairy cow? 06
- (b) Mention the common treatment procedure for long bone fracture in large animals. 04
4. (a) What are the causes, symptoms and treatment of subsolar abscess in cattle? 04
- (b) Describe briefly about the upward fixation of patella in a milking cow. 06
5. Write short notes on *any two* of the followings:- 2x5=10
 - (a) Infectious arthritis ('joint ill') of calves
 - (b) Stringhalt
 - (c) Claw amputation
 - (d) Principles of treatment for arthrodesis

Chittagong Veterinary and Animal Sciences University
Faculty of Veterinary Medicine
Department of Medicine and Surgery
M. S. in Surgery, Semester: July- December, 2017
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. a) Describe the functions and techniques used of Schirmer tear test. What are the ophthalmic stains used for diagnostic purpose of eye examination? 5.0
b) What are the special diagnostic imaging techniques/tools used for eye examination? Write down their uses briefly. 5.0
2. a) Quote the different tests/ techniques used under neuro-ophthalmic examination. 3.0
b) Mention the lacrimal apparatus with their functions. Describe briefly important surgical affections and their correction of cornea. 7.0
3. a) Explain the physiological control of intraocular pressure. List the important tools/techniques with their functions used for diagnosis for intraocular pressure. 5.0
b) Write down the factors responsible for normal variation in intraocular pressure. Illustrate briefly the important surgical techniques and their objectives for the treatment of glaucoma. 5.0
4. a) What is lens and how it maintains normal position? Mention some congenital and acquired conditions of lens. 5.0
b) Briefly describe different types of cataract and its surgical treatment. 5.0
5. a) Define fundus. Mention the important problems associated with retina. What are the cranial nerves involve in neuro-ophthalmology? 5.0
b) Write their functions. Write short note on anisocoria and Horner's syndrome. 5.0

M.S. in Surgery; July-December Semester-2017

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 questions)

1. (a) How will you classify the wounds according to the clinical appearance? Briefly describe the maturation phases of wound healing. 04
- (b) Discuss advantages and disadvantages of the different closure techniques after esophagotomy. 03
- (c) What are complications associated with foreign body removal from the esophagus? 03

2. (a) What is gastric dilatation–volvulus (GDV)? List the clinical signs and treatment for a dog with acute GDV. 04
- (b) Define volvulus and intussusception. What are the types and treatment of intussusception in dog? 06

3. (a) If a dog has urethral stones, what technique can be used to attempt to move them into the bladder for removal via cystotomy? 04
- (b) Discuss the types of suture material that are best suited for urinary bladder surgery. 02
- (c) Define comminuted fracture. What is the best treatment method for articular fractures of the temporo-mandibular joint? 04

4. (a) List some biologic and mechanical characteristics of pelvic fractures. 02
- (b) Which pelvic fractures are considered surgical or nonsurgical? How are nonsurgical pelvic fractures managed? 03
- (c) What is the Salter-Harris classification scheme? Describe the types of Salter-Harris fractures. 05

5. Write short notes on *any two* of the followings:- 2x5=10
 - (a) Freshening of wound edges.
 - (b) Nerve injuries with pelvic fractures
 - (c) Common tubes used in veterinary surgery.
 - (d) TPO for hip dysplasia.

M.S. in Surgery; July-December Semester-2017
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 questions)

1. (a) Define Nuclear Medicine. 01
(b) What are the differences among Chiropractic, Physiotherapy and Osteopathy? 06
(c) Mention the common radioisotopes used in Veterinary radiology. 03

2. (a) What do you mean by radiotherapy? What types of diseases can be treated with radiotherapy in animals? 06
(b) What are the common side effects of radiotherapy? 04

3. (a) List out some common veterinary equipments used by physical therapist for animal? 04
(b) Briefly describe the use of therapeutic ultrasound and Neuromuscular electric stimulation in the treatment of small animals. 06

4. (a) Explain the Lymphatic drainage system in dog. What is the importance of lymphatic drainage system in physiotherapy? 03
(b) Define acupuncture? What does acupuncture actually do? 04
(c) Briefly describe the different uses of acupuncture in animals? 03

5. Write short notes on *any two* of the followings:- 2x5=10
 - (a) Use of Gamma ray
 - (b) Treatment of arthritis
 - (c) Hydro-treadmill therapy
 - (d) Massage therapy

Chittagong Veterinary and Animal Sciences University
MS in Medicine Semester Final Examination- 2017
Course Title: Fluid Therapy and Blood Transfusion (Theory)
Course Code: FTB-602
Department of Medicine & Surgery
Time: 2 Hours; Full Marks: 40

Answers any eight (08) questions (5 marks in each question)

1. What is fluid therapy? Describe the importance of fluid therapy in animal body.
2. How will you assess the animal suspects for dehydration?
3. Identify the evaluation and monitoring parameters that may be used for patients receiving fluid therapy.
4. Compare the routes of fluid administration in dog with merits and demerits.
5. Enumerate the maintenance fluid rates in dog, cat and ruminant. Recommend the possible considerations for giving fluid in sick patients.
6. Briefly describe the process of catheter placement, maintenance and monitoring in pet.
7. Contrast the different blood groups in cattle, sheep, goat, horse, donkey, dog and cat.
8. Identify the causes of calf scour in relation to age of animal.
9. Illustrate how fluids distribute in animal body.
10. Briefly describe the intravenous fluid therapy in cattle.

Chittagong veterinary and Animal Sciences University

Department of Medicine and Surgery, Faculty of Veterinary Medicine

MS in Medicine, July-December Semester-2017

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 do you mean by vital sign? What vital signs are most important in the emergency patient of farm animal? 03
- b) Define shock. Name the four pathophysiologic classification of shock. Describe briefly the cardiogenic shock. 04
- c) What is heart failure? List the common cardiac problem in farm animal. What measures would you take for a patient with cardiac insufficiency? 03
- 02 a) Define and classify anaphylaxis. What is the initial treatment for systemic anaphylaxis? 04
- b) What do you mean by pneumonia? How do you recognize a patient with severe respiratory distress? 04
- c) Why vitamin B-complex deficiencies seldom occur in ruminants? 02
- 03 a) Why high yielding dairy cows are more susceptible to ketosis? Highlight the clinical signs and line of treatment of ketosis in dairy animal. 04
- b) List the common metabolic disorders found in farm animal in Bangladesh. Mention the synonyms of hypocalcaemia, hypoglycemia, hypomagnesaemia and rhabdomyolysis in animal. 03
- c) What is mineralization? Write down the roles of vitamin D in calcium metabolism. 03
- 04 a) How can the origin of hematuria located? What urinalysis findings are suggestive of UTI? 04
- b) What do you mean by pathognomonic clinical sign? Write down the pathognomonic clinical signs of rickets, myopathy, pyelonephritis, milk fever and post-parturient hemoglobinuria in farm animal. 03
- b) List the important trace mineral in farm animal with significant clinical signs due to their deficiencies. 03
- 05 Write short notes on the following (*any two*) 5*2=10
- i) Fibrous osteodystrophy in goat
- ii) Fatty liver in cow
- iii) Fat soluble vitamin in farm animal

Good Luck

Chittagong Veterinary and Animal Sciences University
Faculty of Veterinary Medicine
Department of Medicine and Surgery
M.S. in Medicine
Semester: July – December, 2017
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) Define stereotypic movements in zoo and wild animals with etiology. (2+4)= 6
(b) How do you identify a stereotypic movement in zoo and wild animals? 2
(c) How can the frequency of stereotypic behaviors be reduced in zoo and wild animals. 2
2. Describe the etiology, transmission, clinical signs, post – mortem lesions, diagnosis, control and public health importance of Feline Spongiform Encephalopathy in wild cats. 10
3. (a) How do the migratory birds play an important role for spreading the Avian Influenza in Bangladesh? 4
(b) Write down about clinical signs, post – mortem lesions, diagnosis, treatment, prevention and control strategy of Avian Influenza in Guinea Fowl at Chittagong Zoo. 6
4. What do you understand by the term *Mycobacterium avium* Complex (MAC) in Tapir? Write down the clinical signs, post – mortem lesions, diagnosis, treatment and control of MAC in Tapir at Melbourne National Zoo, Australia. (2+8)= 10
5. (a) What do you understand by emerging and re – emerging diseases of Zoo and Wild Animals? Enlist 5 (five) emerging and re – emerging diseases of Zoo and Wild Animals. (2+3)= 5
(b) Make a vaccination schedule for Exotic Mammals in a tabular form. 5
6. (a) Write down the etiology, clinical signs and treatment of Tetanus in Rhesus Monkey. 3
(b) What is Kikuth's disease? Write down the transmission, clinical signs, post – mortem findings, treatment, prevention and control of this disease in canary birds. (1+6)= 7

- GOOD LUCK -

Chittagong Veterinary and Animal Sciences University
Faculty of Veterinary Medicine
Department of Medicine and Surgery
MS in Medicine
Semester: July-December 2017
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 leptospirosis in dogs. **06**
(b) What are the vaccination schedules for dogs and cats? **04**
2. Write down the etiology, various clinical forms, diagnosis, treatment, prevention and control of canine distemper. **10**
3. (a) How can you differentiate between infectious canine hepatitis and canine parvovirus infection? **05**
(b) Paracetamol poisoning - why is it fatal in cats and how can you treat it? **05**
4. Write down the etiology, clinical signs, diagnosis, treatment, prevention and control of feline plague. **10**
5. (a) What are the zoonotic significances of toxoplasmosis? **02**
(b) Write down the etiology, clinical signs, treatment and control of canine parvovirus infection. **08**
6. Write short notes on ancylostomiasis and mange infestations in dogs. **10**

Chittagong Veterinary and Animal Sciences University
Faculty of Veterinary Medicine
Department of Medicine and Surgery
M. S. in Surgery, Semester: July- December, 2017
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) Write down the patient preparation regarding general anaesthesia in small animals. 3.0
b) Explain the objectives and classification of premedication with example. 2.0
c) Write in briefly clinical properties and uses of atropine sulphate, xylazine and diazepam. 5.0
2. a) What are the clinical findings usually observed during different stages of general anaesthesia? 5.0
b) Write the important characteristic/ functions of commonly used two injectable general anaesthetics. 5.0
3. a) If you want inhalation anaesthesia by isoflurane for spaying in a 20kgs 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) What are the parameters usually consider for anaesthetic emergencies and how will you diagnose that? 5.0
b) What how will you diagnose cardiopulmonary arrest and resuscitate such problem? 5.0
5. a) What are the important factors usually we consider during neonatal and geriatric patients. 5.0
b) How will you select suitable anaesthesia for caesarean and ocular patients? 5.0