Chattogram Veterinary and Animal Sciences University
DVM 4th year 2nd Semester Final Examination -2019
Subject: Meat Science and Animal By-product Technology
Course Title: MAT-402 (T)
Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer four (4) question from each section where question number 1 and 7 are compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

1.	a)	Present the existing meat marketing systems of Bangladesh in a flow chart.	4
	b)	State the problems related to present beef marketing system in Bangladesh.	4
2.	a)	Draw and label a slaughter house with its initial components.	5
	b)	How will you prevent the carcass contamination?	4
3.	a)	Mention the different preservation methods of meat and meat products. Which method will you recommend for Bangladesh and why?	5
	b)	Write down the mode of transmission of various types of diseased from meat animals in a tabular form.	4
4.	a)	Name the different types of food additives and preservatives that are readily used in the meat products with their purposes and dose levels.	5
	b)	Mention the linoleic acid content, iodine values and refractive index and meat of different animal species.	4
5.	a)	What are the major slaughter house by products? Why are their yield less in developing countries compared to developed countries?	5
	b)	Design the layout of a beef processing industry.	4
6.	a)	Write short notes (any three) on: I. Rigor mortis, II. Stunning III. Marbling IV. Collagen V. Rib eye area VI. Simmering VII. HACCP	9

SECTION-B

7.	a)	Discuss the importance of muscle carbohydrate conversion during meat processing.	3
	b)	Outline the process of development of acidification in meat. What are the possible ways to end glycolysis?	5
8.	a)	Define meat: Describe the microscopic structure of the muscle fibre in meat.	5
	b)	Write down the chemical composition of different types of typical meat.	4
9.	a)	What do you mean by curing? Write down the principle and importance of curing hides and skins.	5
	b)	What are recommendations to overcome the huge damage of hides and skins during Eid-ul-Azha?	4
10.	a)	What are suggestions for proper refrigeration, handling and transport of carcass and meat?	5
	b)	Differentiate cleaning from disinfection of meat plant. What are the major sources of contamination of a meat plant?	4
11.	a)	Wool is a versatile natural fibre of sheep. Explain--	5
	b)	Discuss the purpose and process of nitric salt curing.	4
12.	a)	Briefly discuss the factors affecting the quality of hides and skins.	5
	b)	Discuss the prospects of meat industry in Bangladesh.	4

Chattogram Veterinary and Animal Sciences University
DVM 4th year 2nd Semester Final Examination -2019
Subject: Farm Animal Medicine-II
Course Title: FAM-402 (T)
Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer three (3) question from each section where question number 1 and 5 are compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

1. a) Write down two injectable anthelmintics with their generic name and trade name as well as dosage, route and course. 3.0
   b) Write down the name of diseases transmitted by tick. Prescribe for the tick infestation in bull. 3.0
   c) What are the precautionary measures adopted by the owner during spraying or dipping by insecticide? 2.0
   d) Name the intestinal parasite causing diarrhea in cattle. Write down the treatment with specific drug for them. 3.0

2. a) Write down the important blood sucking intestinal parasites in farm animal. Write down the line of treatment of haemonchosis in calf. 5.0
   b) Write the treatment of *Schistosoma bovis* in cattle. 2.0
   c) Differentiate between fascioliasis and paramphistomiasis in cattle. 2.0
   d) Briefly describe guttural pouch mycosis in horse. 3.0

3. a) What do you mean by polyarthritis? Differentiate between mycoplasmal and bacterial mastitis in cow. 4.0
   b) How will you manage a case of myiasis at interdigital space developed as the complication of FMD of a cow? 4.0
   c) Illustrate the epidemiological features and treatment of dermatophytosis in common farm animals. 4.0

4. a) Calf coccidiosis is more common during rainy season in our country, justify it. Discuss line of treatment and control of cocciodiosis at your farm. 4.0
   b) How would you apply your knowledge about wet, thick and thin smear during diagnosis of different blood protozoal infection? How Q fever is transmitted from animals to human? 4.0
   c) What is pulmonary sequestrum? Why it is important? Describe clinical findings of CBPP. 4.0

Section - B

5. a) Differentiate between two diseases of cattle where urine color appears abnormal. 3.0
   b) Why haemoglobinuria is absent in anaplasmosis? A dairy farm is located on the top of a hill. About 10% of the animal is suffering from generalized lymphadenopathy. What is the diagnosis? How will you confirm it? Also write the treatment of the disease. 4.0
   c) Write down the line of treatment of both acute and chronic fascioliasis. 4.0

6. a) Write down the name of most important cestode affecting small ruminant in our country. Briefly describe the clinical findings and treatment of its infestation. 4.0
   b) Write down the methods of transmission of Tsetse fly disease. Sketch the procedure of diagnosis of Nagana. 4.0
   c) Discuss about the treatment and control of Dourine in horse. 4.0

7. a) A buffalo calf in its second week of age was suffering from anorexia and mild coughing. On clinical examination steatorrhea has been found. Dam of this calf was dewormed one year back. How could you diagnose the condition? Outline the treatment along with advice you would like to give the owner of the patient. 4.0
   b) Which stage of rumen fluke is detrimental to young cattle? Discuss about effective treatment along with the diagnosis of paramphisotmiasis in buffalo. 4.0
   c) Construct a treatment protocol along with control of hump sore in Zebu cattle. 4.0

8. a) Immune evasion affects an effective vaccine production in trypanosomiasis. Explain it. 3.0
   b) Write down the epidemiology and clinical sign of coccidiosis in calf. 3.0
   c) Write down the clinical signs and treatment of bovine kerato-conjunctivitis of seven days duration? 3.0
   d) Design a treatment protocol for anaplasmosis in goat. 3.0

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CHATTOGRAM VETERINARY AND ANIMAL SCIENCES UNIVERSITY

DVM 4th Year 2nd Semester Final Examination-2019

Subject: Pet and Companion Animal Medicine (Theory)

Course Title: PAM-402

Full Marks: 35, Time: 2 hours

(Figure in the right margin indicate full marks. Answer any two (2) from each section of which question number one (1) is compulsory. Use separate answer script for each section.)

Section A

1	a	Name four viral diseases of dogs and cats each.	3
	b	Write down the causal agent, clinical signs, diagnosis, treatment and control of parvoviral enteritis in dogs.	5
2	a	Which disease of cats may cause abortion in women? Write down its etiology, epidemiology and treatment in cats.	4
	b	Why paracetamol is strictly prohibited to use in treatment of cats.	2
	c	Mention the causal agents, clinical signs, diagnosis and treatment of dermatophytosis in dogs.	3
3	a	Mention organisms involved in "Respiratory disease complex" in cats.	2
	b	Describe the clinical forms and prevention of rabies in dogs.	3
	c	Mite infestation is very common in rabbit, why? How will you treat it?	4

Section B

4	a	Write down the etiology, transmission, clinical signs, treatment and control of leptospirosis in dogs.	4
	b	Enlist the food items which are toxic for dogs.	2
	c	Write down the etiology and clinical signs of canine demodicosis. Give a prescription for a dog of 25 kg body weight affected with demodicosis.	3
5	a	Which filarial worm may be found in the heart of dogs? Write down the clinical signs and treatment of a dog affected with this worm.	3
	b	Write down the clinical signs of following diseases: (i) Lyme disease (ii) Infectious canine hepatitis (iii) Snuffles	3x2=6
6		Write short notes on (a) Deworming of dogs and cats (b) Kennel cough (c) Malassezia infection in dogs	3x3=9

Chattogram Veterinary and Animal Sciences University
DVM 4th year 2nd Semester Final Examination -2019
Subject: Food Hygiene and Veterinary Public Health
Course Title: FHV-402 (T)
Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer five (5) question from each section. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

1.	a)	Define public health and veterinary public health. Write down the core domains of veterinary public health.	2+2 =4
	b)	Mention the fundamental sections of veterinary public health in Bangladesh.	3
2.	a)	Define zoonoses. Classify zoonoses according to ecosystem and mode of transmission.	1+2=3
	b)	What is occupational hazard? Write down the persons at risk related to occupational and social groups determined by WHO.	1+3=4
3.	a)	Mention the chemical food preservatives most commonly used in different foods with their maximum tolerance dose and target organism.	4
	b)	Explain food intoxication. Classify food borne disease with examples.	3
4.	a)	Define meat hygiene. What are the factors influencing the carcass yield?	1+1=2
	b)	Which method is most safe for stunning process? Briefly explain the electrical and chemical methods of stunning.	1+4= 5
5.	a)	Explain the term water activity (a_w). List the inhibiting substances that are naturally present in different foods and fruits.	2+2=4
	b)	What do you mean by indicator bacteria? What is their importance in food microbiology?	1+2=3
6.	a)	Write down the basis of meat inspection and carcass judgement for condemnation.	4
	b)	Explain the following terms.	3
	I.	Pale Soft Exudative (PSE)	
	II.	Bloom	
	III.	Marbling	

SECTION-B

7.	a)	Write down the causal agent of the following: I)Bread mold II) Dairy mold III) Neck rot in bananas IV) Whiskers V) White spot in meat VI) Black spot in meat VII) Brown color in milk VIII) Fruity flavor in milk IX) Black rots in eggs X) Yellow spot in eggs.	0.5×10=5
	b)	Mention the slaughtering rules which are specifically described in Talmud.	2
8.	a)	What are the differences between thermal death time (TDT) and thermal death point (TDP)? Write down the principles of food preservation.	2+2=4
	b)	Tabulate different biological spoilages of canned food.	3
9.	a)	Enumerate the sources of contamination and methods of preservation of fish.	4
	b)	Write down the significant characteristics observed in meat due to alteration of pH.	3
10.	a)	How could you differentiate between GMP and HACCP?	3
	b)	Define CCP. Enlist 5 national and international food control agencies separately.	2+2=4
11.	a)	What is grade A pasteurized milk? What preservatives can be used for increasing keeping quality of raw milk?	1+3=4
	b)	How will you determine the keeping quality of milk?	3
12.	a)	What are the treatment protocols you will follow the before slaughtering a sheep? Write down the general principles of ante-mortem and post-mortem examination.	2+3=5
	b)	Mention the percentages of contamination commonly found the abattoir from different sources.	2

Chattogram Veterinary and Animal Sciences University
DVM 4th year 2nd Semester Final Examination -2019
Subject: Pet and Companion Animal Medicine
Course Title: PAM-402 (T)
Full Marks: 35, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer **any two (2)** questions from each section where question number 1 is compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

1.	a)	Write down the standard deworming and vaccination schedule for pet dogs and cats.	5
	b)	How can you clinically differentiate scabies from demodicosis in dogs?	3
2.	a)	Mention the organism that are responsible for causing abortion in dog. Briefly describe about pseudopregnancy in dogs.	3
	b)	Enlist the infectious bus respiratory system infection in cats. Write down the common preventive measures to reduce respiratory system infection in cats.	4
	c)	How can you diagnosis and treat diabetes in cats?	2
3.	a)	Enlist the antibiotics that are contraindicated to use in young dog with mentioning the specific reason.	3
	b)	Write down the line of treatment of pediculosis and demodicosis in dogs?	3
	c)	Write down the clinical management of paracetamol poisoning in dogs.	3

Section-B

4.	a)	How can you differentiate leptospirosis from infectious canine hepatitis clinically?	3
	b)	Write down the line of treatment of icteric dog.	3
	c)	How can you clinically manage parvo virus infection in dogs?	3
5.	a)	Enlist some diseases of cats which are manifested by polyuria and polydipsia. Mention some antioxidant that are used in liver disease.	2
	b)	Briefly describe 'Eclampsia'in cats.	3
	c)	Write down the etiology, epidemiology, clinical signs and treatment of myxomatosis in rabbit	4
6.		Write short note (any three)	3×3= 9
	a)	Hair ball in rabbit	
	b)	Snuffles in rabbit	
	c)	Ear mite infestation in rabbit and dogs	

Chattogram Veterinary and Animal Sciences University
DVM 4th year 2nd Semester Final Examination -2019
Subject: Agricultural Extension
Course Title: AEX-402 (T)
Full Marks: 35, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer three (3) question from each section where question number 1 is compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

1.	a)	Define extension and agricultural extension.	1
	b)	Name two text books of agricultural extension with their authors.	1
	c)	What is the necessity of studying agricultural extension as a student of veterinary medicine.	3
2.	a)	Define extension communication. Write the importance of communication in agricultural extension.	3
	b)	Classify communication channels with examples.	3
3.	a)	Define education and learning. State the difference between formal and non-formal education.	3
	b)	What are the differences between administration and manager in view of extension services?	3
4.	a)	What od you mean by extension philosophy and principle?	2
	b)	Briefly discuss the widely used principles of extension in the field of livestock services.	4
5.	a)	Diagrammatically show the motivational process with brief description.	3
	b)	Enlist the techniques and tools of monitoring.	3

SECTION-B

6.	a)	Define leader and leadership. Compare between professional and local leaders.	3
	b)	Briefly discuss the qualities of a good extension leader.	3
7.	a)	Define teaching and state the criteria for effective extension teaching.	3
	b)	Classify extension teaching methods. Which one is more effective between the methods of result demonstration and method demonstration? Explain	3
8.	a)	Define adoption of innovation.	2
	b)	Illustrate the adopter categories based on farmers innovativeness with diagram.	4
9.	a)	Define technology and technology transfer.	3
	b)	Explain exercise as a law of learning.	3
10.	a)	Write short notes (any two) of the followings:	3×2 =6
	i)	National Livestock Extension Policy (NLEP)	
	ii)	Adopter categories of farmers	
	iii)	Program development process. Berlo's communication model.	

Chattogram Veterinary and Animal Sciences University
DVM 4th year 2nd Semester Final Examination -2019
Subject: Zoo and Wild Animal Medicine
Course Title: ZWM-402 (T)
Full Marks: 35, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer two (2) question from each section where question number 1 is compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

1.	a)	Describe the scope of zoo and wildlife vets in Bangladesh.	4
	b)	Enlist five (5) important zoonotic diseases in human- animal interface in Bangladesh.	2
	c)	Define safari part and zoo. Enlist the critically endangered animals of Bangladesh.	2
2.	a)	Name five (5) feral birds.	2
	b)	Describe the etiology, clinical signs, post mortem lesions, diagnosis, treatment, prevention and control of fowl cholera in feral birds.	4
	c)	Mention the etiology and treatment of clubbed feet in an ostrich.	3
3.	a)	Write down the etiology, transmission, clinical signs, post-mortem lesions and treatment of Chlamydophila in hill Myna	4
	b)	Describe briefly etiology, transmission, clinical signs, post-mortem lesions, diagnosis, treatment, prevention and control of TB in the Royal Bengal tiger of MSM Safari park, and Mirpur	5

SECTION-B

4.	a)	What is musth in an excited elephant in bull?	2
	b)	Describe the etiology, clinical findings, post mortem lesions, diagnosis and treatment of Johne's disease in a Giraffe.	4
	c)	Write down the symptoms and treatment of sarcoptic mange infestation in Dromedary camel.	3
5.	a)	What is bird flu? Write down the etiology, clinical symptoms, diagnosis, prevention and control of bird flu in Blue peafowl	3
	b)	Write down the line of treatment of following diseases	6
	I)	Nutritional roup in Red jungle fowl.	
	II)	Ranipur infestation in python	
	III)	Feline panleukopenia in panther	
6.	a)	Mention the etiology, clinical findings, post-mortem lesions and treatment of Bacterial enteritis in Gorilla.	3
	b)	Write short note on following	3×2=6
	I)	Psittacosis in sulfur crested Cockatoos.	
	II)	Ancylostoma canine infestation in wolf	

Chattogram Veterinary and Animal Sciences University
DVM 4th year 2nd Semester Final Examination -2019
Subject: Andrology and Clinical AI
Course Title: ACA-402 (T)
Full Marks: 35, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer three (3) question from each section where question number 5 is compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

1. a) Write down the sexual behaviour of bull and ram during mating. 3
   b) What are the factors responsible for infertility in a bull? 3

2. a) Define spermatogenesis. How it is regulated by hormone in males? 3
   b) How does season effect on spermatogenesis in ram and buck? 3

3. a) Mention the methods of semen collection. How will you collect semen from buck to preserve it in future use? 3
   b) Justify the importance to keep AI record in farm. How will you evaluate fertility of a dairy herd? 3

4. a) Enumerate the semen borne disease. How will you prevent the transmission of semen borne disease? 3
   b) What is AI? Assemble the steps of performing AI in a cow? 3

SECTION-B

5. a) Mention site of semen deposition by AI in cow, ewe, doe, bitch, mare, sow and specific time and temperature to thaw semen before AI. 3
   b) How will you assess body requirement of a bull weighing 200 Kg for breeding purpose? 2

6. a) How will you physically examine a breeding bull before semen collection? 3
   b) Write down the procedures of fresh semen evaluation of a ram in a breeding station. 3

7. a) Write the causes of infertility in a male animal. How can you minimize the infertility? 3
   b) Write short notes on any one (1) 3
   I) Cryptorchidism
   II) Impotentia generandi and impotentia coeundi

8. Write short note (any two) 3×2 = 6

   a) Testicular degeneration
   b) AI in poultry
   c) ~~Semen~~ vesiculitis
   Seminal

Chattogram Veterinary and Animal Sciences University
DVM 4th year 2nd Semester Final Examination -2019
Subject: Animal Biotechnology
Course Title: ABT-402 (T)
Full Marks: 35, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer three (3) question from each section where question number 1 is compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

1.	a)	What do you mean by biotechnology and animal biotechnology?	2
	b)	Write down in brief the impact of biotechnology in livestock improvement.	3
2.	a)	What are the factors affecting conception rate in artificial insemination? Discuss briefly.	3
	b)	Discuss the technique of thawing of bull semen for the purpose of AI.	2
	c)	List the major activities of an AI center.	1
3.	a)	Define estrus synchronization. Describe the principles of estrus synchronization.	4
	b)	Write potential, advantages and disadvantages of synchronization of estrus.	2
4.	a)	What do you mean by gene cloning? Write down the uses of DNA cloning.	2
	b)	List down the differential methods used for DNA sequencing. Write down the applications of DNA sequencing.	2
	c)	How Dolly sheep was produced? Explain in brief with neat diagram.	2

SECTION-B

5.	a)	Why do we use in-vitro fertilization in cattle at this time? Write down the basic steps involve for IVF.	2
	b)	What is embryo sexing? Write down the benefits of embryo sexing.	2
	c)	What are the various methods of embryo sexing? Briefly explain any one of them.	2
6.	a)	Write down the significance of embryo transfer technology.	2
	b)	List down the factors that may alter success rate of embryo transfer	2
	c)	How will you evaluate and grade the embryos in embryo transfer technology?	2
7.	a)	What is transgenics? Why do use transgenics instead of selective breeding?	2
	b)	What are the different methods of gene transfer? Explain any one of them.	2
	c)	List down some genetically modified animals with their specific contribution.	2
8.	a)	What do you mean by genomics, transcriptomics, proteomics and metabolomics?	2
	b)	Why bioinformatics is necessary in your field of study? List down the tools used in bioinformatics.	2
	c)	Briefly explain the applications of bioinformatics in animal industry.	2