Chattogram Veterinary and Animal Sciences University
DVM 4th year 2nd Semester Final Examination-2023
Course Title: Agricultural Extension
Course Code: 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 **eight (8)** 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.	2
	b)	Describe two important principles of agricultural extension work.	4
2.	a)	State the functions of Department of Livestock Services (DLS) as an extension organization.	3
	b)	Discuss the qualities of a good local leader.	3
3.	a)	Define motivation. Describe the ways of motivating extension workers.	3
	b)	Write down the implications of Maslow's need theory in conducting livestock extension activities.	3
4.	a)	Enlist the attributes of participatory approaches.	2
	b)	Distinguish between PRA and RPA with examples.	4

SECTION-B

5.	a)	Illustrate the importance of 'Farm Clinic' as an extension method in livestock technology transfer.	2
	b)	Define and classify extension teaching methods with examples.	4
6.	a)	Define communication. Enlist the elements of communication process.	2
	b)	Suppose you are a livestock extension officer. What are the factors that you have to consider for effective communication with the service recipients?	4
7.	a)	Classify innovation with examples.	2
	b)	State different categories of the potential adopters in a social system. Distinguish between innovators and laggards.	4

8. Write short notes (any two) to the followings: 2.5x2=5
   i) Noise in communication
   ii) Farm and home visit
   iii) Monitoring vs Evaluation

Course Title: Meat Science and Animal By-products Technology
Course Code: MAT - 402 (T)
Full Marks: 70, Time: 3 Hours

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

SECTION-A

1. a) Briefly discuss the steps involved in slaughtering and dressing of food animals. 3.0
   b) Define organic and conventional meats. Discuss the desired conditions required for producing hygienic organic meat. 4.0
   c) Illustrate different types of functional meats and meat products for human consumption. 4.0

2. a) Label the structures and mention the functions of muscle fibers in meat. 4.0
   b) Describe the handling and transportation procedures of meat and meat products for safe consumption of human being. 4.0
   c) Briefly discuss the abnormalities found during post-mortem examination. 4.0

3. a) What is meat preservation? Discuss the principles of meat preservation. 4.0
   b) Narrate the preservation methods of meat and meat products. Which preservation method is the best and why? 4.0
   c) What is dressing percentage? Briefly discuss the factors that affect the dressing percentage in different species of animal. 4.0

4. a) Define rigor mortis. How does it happen in different phases? Which animal belongs to higher rigor mortis and why? 4.0
   b) Enlist the desired facilities required for an abattoir. 4.0
   c) How should you make sure that an animal is completely dead after slaughter? Write down the precautions of animal slaughter. 4.0

SECTION-B

5. a) Define p^H and ultimate p^H of meat. Discuss and justify the preconditions for obtaining a desired meat p^H. 3.0
   b) Illustrate the process of post-mortem acidification in meat. 4.0
   c) State the physical and chemical processes that occur during ageing processes. 4.0

6. a) What do you mean by effective waste management? Write down the detailed procedure for effective waste management systems. 4.0
   b) What is gelatin? What are their practical uses? List the endocrine glands widely used in medical industry. 4.0
   c) Briefly discuss the problems and prospects of slaughterhouse by-products. 4.0

7. a) Discuss different types of packaging materials and explain their suitability under different storage conditions. 4.0
   b) Explain the potential of meat as a source of food for human being. 4.0
   c) Discuss the importance of smoking and fermentation in meat processing. 4.0

8. Write short notes **(any four)** on the followings: 4×3= 12.0
   i) Modified atmospheric packaging
   ii) Abattoir layout
   iii) Identification and certification of meat
   iv) Meat Control Act 2011
   v) Artificial meat
   vi) Ante-mortem examinations

Chattogram Veterinary and Animal Sciences University
DVM 4th year 2nd Semester Final Examination-2023
Course Title: Animal Biotechnology
Course Code: 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 **one (1)** is compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

1. a) What is Biotechnology? State the areas of biotechnology with example(s). 3.0
   b) Point out the economic implications of Animal Biotechnology in developing world. 2.0

2. a) Differentiate superovulation from embryo transfer technique. 3.0
   b) Outline the embryo transfer technique in dairy production. 3.0

3. a) Distinguish between parental and recombinant combination. 2.0
   b) How will you develop a transgenic ewe following gene transfer method? 4.0

4. a) State the tools those are used in bioinformatics. 2.0
   b) Differentiate gene cloning from reproductive cloning. 2.0
   c) Illustrate different steps of PCR with specific temperature and time. 2.0

SECTION-B

5. a) "Artificial Insemination" is superior to natural breeding – Justify. 2.0
   b) How will you preserve bull semen for long time use? 4.0

6. a) State the steps of IVF in cattle. 2.0
   b) Outline the factors influencing IVF in domestic animal. 1.0
   c) State the impact of artificial insemination in dairy development of Bangladesh. 3.0

7. a) What is bioinformatics? Explain the term "algorithm". 3.0
   b) Illustrate the importance of genetic engineering in modern life. 3.0

8. Write short notes on any **three (3)** from the followings: 3×2=6.0
   a) Embryo sexing and sex chromosomal chimerism analysis
   b) Impact of MOET on beef cattle improvement
   c) Gene therapy
   d) Bioinformatics databases

Chattogram Veterinary and Animal Sciences University
DVM 4th Year 2nd Semester Final Examination-2023
Course Title: Andrology and Clinical Artificial Insemination
Course Code: ACA-402 (T)
Full Marks: 35, Time: 2 Hours

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

SECTION-A

1.	a)	Define andrology and artificial insemination.	2
	b)	Draw and label the morphology of a bull, buck and cock spermatozoa.	3
2.	a)	State the function of seminal plasma.	2
	b)	In a commercial dairy farm, how would you perform AI for 10 estrus cows out of 80 cows?	4
3.	a)	What are the factors affect the success of AI in a cow?	3
	b)	Develop a management protocol of bull infertility for breeding station.	3
4.	a)	Briefly describe the thawing procedure of frozen semen.	2
	b)	Define libido. Enlist the diseases of male reproductive system.	1+1=2
	c)	'Breeding soundness evaluation is important for quality semen production'- justify it.	2

SECTION-B

5.	a)	Define the terms- spermatogenesis, spermiogenesis, spermiation, ejaculation.	2
	b)	A 6-year old bull having hot, painful swelling in testis. How can you diagnose the causes and how will you manage these conditions?	4
6.	a)	Compare between liquid and frozen semen used for artificial insemination.	3
	b)	Show the hormonal regulation of spermatogenesis with a diagram.	3
7.	a)	Illustrate the factors affecting the quantity and quality of semen.	2
	b)	Define semen borne and venereal diseases.	2
	c)	Describe the importance of andrology in field condition.	2

8. Write short notes on (any three): 3×2=6

i) Castration of buck ii) Thermoregulation of testis

iii) AI calendar iv) Pizzle rot

Chattogram Veterinary and Animal Sciences University
DVM 4th Year 2nd Semester Final Examination-2023
Course Title: Pet and Companion Animal Medicine
Course Code: PAM -402 (T)
Full Marks: 35, Time: 2 Hours

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

SECTION-A

1. a) Define pet and companion animal. Enlist 3 available breeds of dog and cat we find in our regular practice. 1+1=2
   b) Mention the vaccination schedule of dog and cat in Bangladesh perspective with 2 available vaccine brands for the two species. 3

2. a) Enumerate the transmission, predisposing factors and diagnosis of salmonellosis in dog and cat. 3
   b) Briefly describe the clinical findings and treatment of canine parvovirus infection in dog. 3

3. a) How will you diagnose and treat hookworm infestation in puppies? 3
   b) Mention the etiology, clinical signs and treatment of feline plague. 3

4. a) Write down the transmission, clinical signs and public health significance of canine brucellosis. 3
   b) Write in detail the treatment protocol of- 3
   i. FIP in cat
   ii. Paracetamol poisoning in cat

SECTION-B

5. a) What do you mean by flea allergy dermatitis (FAD)? Briefly describe the etiology, clinical findings, diagnosis and treatment of FAD in cat. 1+3=4
   b) Mention the consequences of lordosis and high rise syndrome in cat. 2

6. a) Write down the clinical findings of- 3
   i. Hard pad disease in dog
   ii. Atopic dermatitis in dog
   iii. CKD in cat
   b) What is atopic dermatitis? Briefly describe the clinical signs, diagnostic procedures and treatment of mange in cat. 1+2=3

7. a) State the etiology, clinical findings, diagnosis and treatment of feline AIDS. 3
   b) What are the general symptoms of nutritional deficiency in dog? Mention the pathognomonic signs of vitamin A, D & E deficiencies in pet animals. 1+2=3

8. Write short notes on (any three): 3×2=6
   i) Snuffles in rabbit
   ii) Leishmaniasis in dog
   iii) Enterotoxemia in rabbit
   iv) Leptospirosis in dog

DVM 4th year 2nd Semester Final Examination-2023
Course Title: Food Hygiene and Veterinary Public Health
Course Code: FHV - 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 **one (1) and five (5)** are compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

1. a) Define Veterinary Public Health, One Health and Global Health with example (s). 6
   b) Briefly describe the public health challenges in Bangladesh. What role can a public health veterinarian play to solve those problems? 5

2. a) Define BOD and BOD5 2
   b) Suppose you are a meat inspector, and you have diagnosed food animals with following disease conditions. Now mention your decision with proper justification.
   i) Rabies ii) PPR iii) Tuberculosis iv) Avian Influenza 10
   v) Newcastle disease vi) Colibacillosis vii) Fascioliasis viii) Hook worm ix) Anthrax x) Tetanus

3. a) What are the seven principles of HACCP and why are they important? 8
   b) How does HACCP help in identifying and controlling food safety hazard in processing environment? 4

4. a) Define food control. Name the national and international authorities important for food control. 5
   b) Classify food-borne zoonoses with example. Differentiate food infection from food intoxication. 7

SECTION-B

5. a) Enlist intrinsic factors that affect the growth of microbes in food. Explain two of them. 6
   b) Categorize the food preservation methods according to the principles of preservation. 5

6. a) What are the key steps involved in meat inspection process from slaughter to retail? 5
   b) How does meat inspection help to prevent the spread of foodborne illness in the general population? 4
   c) Briefly describe the measures to prevent and control zoonotic diseases. 3

7. a) Define food-borne disease outbreak. Describe the steps of food-borne disease outbreak investigation. 6
   b) List factors affecting food spoilage. Explain any two of them. 6

8. a) Describe the preservation of milk. Mention different types of milk spoilage. 6
   b) What are the factors that affect the spoilage of fish? How will you identify fish spoilage? 6

Chattogram Veterinary and Animal Sciences University
DVM 4th Year 2nd Semester Final Examination-2023
Course Title: Zoo and Wild Animal Medicine
Course Code: ZAM -402 (T)
Full Marks: 35, Time: 2 Hours

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

SECTION-A

1. a) Define zoo, safari park and wildlife sanctuary with examples. 3
   b) What is IUCN and when it was founded? Define emerging and re-emerging infectious diseases of wild animals with examples in each cases. 1+2=3
   c) Describe the role of a vet in the conservation of wildlife in Bangladesh. 2

2. a) Describe the etiology, transmission, clinical syndrome, zoonotic importance, treatment and control of tuberculosis in Royal Bengal Tiger at the Bangladesh national Zoo, Mirpur, Dhaka. 4
   b) Name the chemical agents used for restraining zoo and wild animals with their dose, route and antidote. 5

3. a) Write down the etiology, clinical signs, diagnosis and treatment of psittacosis in parakeets. 3
   b) What is Kikuth's disease? Write down the clinical signs, postmortem lesions, diagnosis and treatment of this disease. 3
   c) Prescribe the following conditions- 3
   i. An African black bear (170 kg) suffering from tick infestation
   ii. Newcastle disease in a group of peafowls
   iii. An African lion (150 kg) suffering from ascariasis

SECTION-B

4 5. a) Name 5 feral birds. Describe the etiology, clinical signs, postmortem lesions, diagnosis, treatment, prevention and control of fowl cholera in feral birds. 4
   b) How will you protect rabbits from parasitic infestation in zoos and safari parks? 2
   c) Write down the etiology, transmission, clinical syndrome, zoonotic importance and treatment of plague in Golden Hamsters at the Animal Resource Branch in icddr'b, Mohakhali, Dhaka. 3

5 6. a) Write down the etiology, transmission, clinical signs, pathognomonic postmortem lesions, treatment, prevention, control and zoonotic importance of equine influenza in zebra at captive condition. 3
   b) Describe the etiology, clinical signs, treatment and control of pouch infection in a female koala at the National Zoo, Melbourne, Australia. 3
   c) Write down the etiology, clinical signs, diagnosis, prevention and control of bird flu in Blue peafowl. 3

6 7. a) Which trematode resides in the oral cavity of indigenous snake? How will you diagnose and treat it? 1+2=3
   b) Classify viral diseases of Primates based on transmission with examples. 2
   c) Mention the upper respiratory tract diseases of tiger. Write down the etiology, route of infection, clinical signs, postmortem lesions, diagnosis and treatment of feline pneumonitis in Royal Bengal Tiger at the Chattogram Zoo. 4

Course Code: FAM-402 (T)
Full Marks: 70, Time: 3 Hours

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

SECTION-A

1. a) Write down the common protozoan diseases that causes diarrhea in calves with their mode of transmission. 4
   b) What is CBPP? Write down the mechanism of developing 'marble lung lesion' in CBPP and also state the line of treatment of this disease. 1+4=5
   c) Enlist 6 common stomach worm of farm animals. 2

2. a) How will you diagnose dermatophytosis under clinical and laboratory conditions? 4
   b) Mention the common name, diagnosis, line of treatment and control of intestinal schistosomiasis in a dairy farm. 5
   c) Illustrate the clinical signs & line of treatment of bovine coccidiosis. 3

3. a) A 5-month old crossbred calf (100 kg) having normal body temperature & voracious eating tendency. However, it is gradually losing weight & also showing pot belly appearance. What is your presumptive diagnosis? Write down a prescription with advice. 5
   b) Differentiate between parasitic and fungal nasal granuloma in cattle. 3
   c) Illustrate the causal agents and symptoms associated with larval tape worm infestation in farm animals. 4

4. a) Bottle jaw occurs in both hemonchosis and fascioliasis, how will you distinguish two diseases? 4
   b) Write down the clinical signs, diagnosis and treatment of theileriosis in a commercial dairy farm. 4
   c) Define burn and scald. Write down the symptoms & line of treatment of 3rd degree burn in a cow. 1+3=4

SECTION-B

5. a) 'Nowadays anaplasmosis has become a silent killer of crossbred cattle in commercial dairy farm'- justify the statement. 3
   b) What is verminous pneumonia? How will you diagnose it clinically & in laboratory? 1+3=4
   c) Define trypanosomiasis. Enlist the diseases caused by trypanosome species in farm animals. 1+3=4

6. a) Write down the pathogenesis & line of treatment of babesiosis in a pregnant cow. 4
   b) State the therapeutic and control plan of eye worm infection in cattle. 4
   c) Differentiate between fungal mastitis and bacterial mastitis. 4

7. a) Enlist lungworms of various farm animals. Discuss the role of earthworm & fungi in the transmission of lungworm infection. 1+3=4
   b) Write down the predilection sites of humpsore infection with relevant clinical manifestation. 4
   c) State the clinical signs, line of treatment and control measures of nitrate poisoning in farm animals. 4

8. Write short notes on (any three): 3×4=12
   i) Degnala disease in cattle
   ii) Q-fever in cattle
   iii) Myiasis in goat
   iv) Toxoplasmosis in doe

Chattogram Veterinary and Animal Sciences University
DVM Supplementary (Make UP) Examination-2023
Course Title: Farm Animal Medicine-II
Course Code: FAM-402 (T)
Full Marks: 70; Time: 3 Hours

(Figures in the right margin indicate full marks. Answer ~~Five (5)~~ Three(3) questions from each section where question number **1 and 5** are compulsory. Use separate answer script for each section. Fractions of the questions are encouraged to answer together.)

SECTION-A

1. a) Nowadays anaplasmosis is a silent killer of cross breed cattle in commercial dairy farms- Justify. 3
   b) What are the mode of transmission and clinical signs of anaplasmosis in a commercial dairy farm and how will you diagnose anaplasma organisms in your Upazilla's mini lab? 4
   c) Write down the line of treatment and control measures of anaplasmosis in your local commercial dairy farms. 4

2. a) Write down the line of treatment of CCPP in goats. 4
   b) Discuss the etiology and risk factors of swine pneumonia. 4
   c) Discuss the epidemiology of typanosomosis in Bangladesh and the global context. 4

3. a) What are the risk factors of coccidiosis in livestock? Correlate the pathogenesis of coccidiosis and enterotoxemia in sheep. 2+2=4
   b) Explain the clinical findings and lab diagnosis of giardiasis and cryptosporidiosis. 4
   c) Write down the pathogenesis of dermatophytosis in farm animals. 4

4. a) About 40% of buffalo calves die every year due to ascariasis. What are the clinical signs and mode of transmissions of ascariasis in buffalo calves? 6
   b) How will you diagnose ascariasis in buffalo calves in field condition and what is the line of treatment and control measures of ascariasis in a buffalo farm? 6

SECTION-B

5. a) Define burn and scald. Write down the line of treatment of 3rd degree burn in a cow. 2+3=5
   b) A bullock of around 400 kg bwt having bottle jaw and gradually becoming emaciated. Lab test report confirms fascioliasis. Write down a prescription with specific anthelmintics and supportive therapy. 6

6. a) Amphistomiasis vs paramphistomiasis, which one is more harmful to animals? Explain. 4
   b) Write down the clinical signs and line of treatment of lungworm infestation. 4
   c) How do you control flies and tick in a farm? 4

7. a) How will you diagnose and treat aural myiasis in a doe? 4
   b) What is dourine? Write down the clinical signs and treatment of dourine in a horse. 4
   c) How will you diagnose fungal mastitis in lab? Write down the treatment and control measures of fungal mastitis in commercial dairy farm. 2+2=4

8. Write short notes (any four)- 4×3=12
   a) Humpsore in bulls
   b) Haemonchosis in goats
   c) Monieziasis in calves
   d) Coenurosis in goats

Chattogram Veterinary and Animal Sciences University
DVM Supplementary (Make UP) Examination-2023
Course Title: Gynaecology and Obstetrics
Course Code: GOB-401 (T)
Full Marks: 70; Time: 3 Hours

(Figures in the right margin indicate full marks. Answer **Five (5)** questions from each section where question number **1 and 5** are compulsory. Use separate answer script for each section. Fractions of the questions are encouraged to answer together.)

SECTION-A

1.	a)	Define Theriogenology, Gynaecology, Obstetrics and Andrology.	4
	b)	Draw and mark the different parts of genital system in a cow.	5
	c)	Name five important gynaecological and obstetrical cases.	2
2.	a)	What is estrus and estrous cycle? Write down the signs of estrous in a cow and a doe.	2+4=6
	b)	Describe briefly the methods of estrous detection in a dairy cow.	6
3.	a)	How do you understand a heifer is in puberty? Describe briefly.	3
	b)	What are the factors may influence the onset of puberty? Describe briefly.	6
	c)	Make a table mentioning the age of onset of puberty in 6 different domestic animals.	3

4. Write down the treatment of following cases (any six)- 6×2=12
   i) Pyometra in a cow of 350 kg bwt
   ii) Vaginal prolapse in a 8-month pregnant high yielding dairy cow
   iii) Retained placenta in a doe of 45 kg bwt
   iv) Cyclic ovaries in a cow of 250 kg bwt
   v) Anestrus in a doe of 35 kg bwt
   vi) Chronic endometritis in a local zebu cow
   vii) Balanoposthitis in a breeding bull

SECTION-B

5.	a)	Write down the clinical signs and treatment procedure of uterine prolapse in a goat.	5
	b)	Mention the periparturient events in a cow.	3
	c)	Briefly describe the c-section in a goat.	3
6.	a)	What is dystocia and utocia?	2
	b)	Describe the fetal cases of dystocia.	6
	c)	A cat has been suffering from delivery pain since last two days without delivering any kids. How do you manage this case?	4
7.	a)	What is delayed ovulation? How will you treat delayed ovulation in a cow?	2+4=6
	b)	Mention the causes of early embryonic death. Give ultrasound interpretation of an inseminated cow at 40 days.	6

8. Write short notes (any four)- 4×3=12
   a) Uterine inertia
   b) Free martin
   c) Maternal recognition of pregnancy
   d) Retained placenta
   e) Pseudopregnancy