

Chattogram Veterinary and Animal Sciences University
DVM 4th year 2nd Semester Final Examination-2022
Course Title: Agricultural Extension
Course Code: AEX-402
Full Marks: 35, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer three (3) question from each section where question number 8 is compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION - A

1. a) State the philosophy of livestock extension. Describe one important philosophy embraced by DLS in conducting livestock extension. 4.0
b) "Extension is a two-way channel"- Explain. 2.0
2. a) State the functions of extension. 3.0
b) Differentiate between formal and extension education. 3.0
3. a) Define innovation with classification. 3.0
b) Enlist the stages of innovation decision process and describe the first stage with example. 3.0
4. a) Define communication. "Communication is an ongoing process"- Evaluate. 3.0
b) Classify 'channel' used in livestock extension communication with example. 3.0

SECTION - B

5. a) Define monitoring and evaluation. 2.0
b) State the steps of program evaluation. 4.0
6. a) Describe the role of local leader in technology transfer. 3.0
b) How can you develop local leaders to perform their role in technology diffusion process? 3.0
7. a) Enumerate the levels of cognitive learning in extension. 2.0
b) Briefly describe the duties and responsibilities of VFA as an extension field worker. 4.0
8. Write short notes (any two) to the followings: 2.5x2=5
 - a) Veterinary Training Institute (VTI)
 - b) Problem identification in relation to program planning.
 - c) Rural Development Academy (RDA)

Chattogram Veterinary and Animal Sciences University
DVM 4th Year 2nd Semester Final Examination-2022
Course Title: Food Hygiene and Veterinary Public Health (Theory)
Course Code: FHV-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 number 1 and 5 are compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

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|----|----|--|---|
| 1. | a) | Classify zoonoses according to the mode of transmission of pathogens. | 3 |
| | b) | State the strategies that can be adopted to control rabies in Bangladesh. | 4 |
| | c) | Write down the tasks of meat hygiene. | 4 |
| 2. | a) | What are the bacterial spoilages of eggs? | 3 |
| | b) | Describe the off flavours that can be recognised upon spoilage of eggs. | 4 |
| | c) | Define canning. Explain biological spoilage and different defects of canning. | 5 |
| 3. | a) | State the general principles of food preservation. | 4 |
| | b) | Explain the methods of drying for the preservation of food. | 4 |
| | c) | State the properties of an ideal antimicrobial preservative. | 4 |
| 4. | a) | Illustrate the terms DFD and PSE. Briefly describe the factors that influence carcass yield. | 5 |
| | b) | State the factors that affect the growth of microorganisms in meat. | 3 |
| | c) | Describe the spoilages of meat under anaerobic conditions. | 4 |

SECTION-B

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|----|----|---|---|
| 5. | a) | Write down the present scenario of public health activities in the context of Bangladesh. | 6 |
| | b) | How does veterinary knowledge contribute to solving public health problem? | 5 |
| 6. | a) | Write down the factors that influence the kind and rate of spoilage in fish. | 3 |
| | b) | Outline the succession of evidence of spoilage of fish. | 3 |
| | c) | Illustrate the source of contamination of milk. Compose objectives of milk pasteurization. Explain different spoilage mechanisms of milk. | 6 |
| 7. | a) | Define hazard related to food industry. Write down the different hazards encountered in a food. | 2 |
| | b) | What is single cell protein (SCP)? What are the raw materials used for growth of SCP? Compose advantage and disadvantage of SCP as compared to conventional food. | 3 |
| | c) | Define HACCP. Summarize chronological developmental history of HACCP. Illustrate the principles of HACCP with example. | 7 |
| 8. | a) | Explain different treatments given to animals prior to slaughter. | 4 |
| | b) | Discuss different slaughtering practices with their merits and demerits. | 4 |
| | c) | What are the essences of slaughtering? Mention the different sections of a modern abattoir. | 4 |

Chattogram Veterinary and Animal Sciences University
DVM 4th year 2nd Semester Final Examination 2022
Subject: Meat Science and Animal By-products Technology (Theory)
Course Title: 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 no. 1 and 5 are compulsory. Use separate answer script for each section. Fractions of the questions must be answered together)

SECTION-A

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|----|----|--|-----|
| 1. | a) | Define meat and meat technology. Discuss the prospects and constraints of large-scale commercial meat industry in Bangladesh. | 3.0 |
| | b) | Briefly discuss the unique contribution of meat in human diet. | 4.0 |
| | c) | How would you inspect and grade the different meat animals? | 4.0 |
| 2. | a) | What is killing-out percentage? Mention the killing-out percentage of different meat animals with their included body parts in it. | 4.0 |
| | b) | Discuss the Muslim method of slaughtering with its advantages and disadvantages. | 4.0 |
| | c) | What are the different steps of carcass dressing for different animal species? | 4.0 |
| 3. | a) | Discuss the sanitation and hygiene process of a meat processing plant. | 4.0 |
| | b) | How should you handle and transport meat from different animals? | 4.0 |
| | c) | Make a design and layout for a modern meat processing industry. | 4.0 |
| 4. | a) | Discuss the curing and preservation procedure of hides and skins. | 4.0 |
| | b) | Enumerate the problems and prospects of slaughter house by-products. | 4.0 |
| | c) | What are the sources and uses of non-meat ingredients in meat industry? | 4.0 |

SECTION-B

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|----|----|--|-----|
| 5. | a) | What is organic meat? What are the conditions for producing organic meat? | 3.0 |
| | b) | Describe different types of functional food with health benefits. | 4.0 |
| | c) | Differentiate between food additives and preservatives. | 4.0 |
| 6. | a) | Shortly describe the beef value chain in Bangladesh. | 4.0 |
| | b) | Describe shortly the ante-mortem and post-mortem defects of hides and skins. | 4.0 |
| | c) | Enumerate the characteristics of wool. Explain in brief the virtues of wool fiber. | 4.0 |
| 7. | a) | How many categories of meat products are available in the world? Describe briefly with examples. | 4.0 |
| | b) | Discuss briefly the rigormortis and tenderization of meat after slaughter. | 4.0 |
| | c) | Explain how stress could lead to defective meat. | 4.0 |
| 8. | a) | Write down the purposes and requirements of packaging materials. | 4.0 |
| | b) | Briefly describe the modified atmospheric packaging of meat and meat products. | 4.0 |
| | c) | Mention different types of packaging materials with their permeability. | 4.0 |

Chattogram Veterinary and Animal Sciences University
DVM 4th year 2nd Semester Final Examination-2022
Course Title: Pet and Companion Animal Medicine (Theory)
Course Code: PAM-402 (T)
Full Marks: 35, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer **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) Define pet and companion animal. Enlist pets we find in our regular veterinary practice. 1
- b) Explain the difficulties in diagnosing canine heartworm infection. Write down the standard guideline of treating this disease in dog. 1+2=3
- c) List the NSAIDs that may cause toxicity in dog and cat. Write down the clinical management of acetaminophen poisoning in cat. 1+3=4
2. a) List the common diseases of guinea pig and hamster. Write down the line of treatment of bacterial enteritis in hamster. 1+2=3
- b) What is CTVT? Write down the transmission, clinical signs, diagnosis and treatment of CTVT. 3
- c) Enlist the types of mange occur in dogs and cats. How will you confirm and clinically manage "walking dandruff" in cat? 3
3. a) Write down the causal agent, clinical signs, diagnosis and treatment of parasite causing esophageal osteosarcoma in dog. 3
- b) Briefly mention the WOAHA guidelines for the prevention and control of rabies in pet animals. 3
- c) Write down the clinical interpretation of TEC, PCV and HbA1c performed over the blood of a cat. 3

SECTION-B

4. a) What is atopic dermatitis? Write down the diagnosis and treatment procedures of atopic dermatitis in dog. 3
- b) Write down the clinical findings of- 6
 - i. Leptospirosis in dog
 - ii. Feline panleukopenia
 - iii. Ascariasis in cat
5. a) Enlist the diseases causing abortion in dog and cat. 2
- b) Write down the etiology, clinical signs, diagnosis and treatment of hard pad disease. 4
- c) Write down the etiology, clinical signs, diagnosis and treatment of feline respiratory disease complex. 3
6. Write short notes (any three): 3×3=9
 - a) Salmonellosis in cat
 - b) Tyzzer's disease in rabbit
 - c) Miliary dermatitis in cat
 - d) Leishmaniasis in dog

Chattogram Veterinary and Animal Sciences University
DVM 4th Year 2nd Semester Final Examination-2022
Course Title: Andrology and Clinical Artificial Insemination (Theory)
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 is compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

1. a) What are the signs of puberty in animal? Describe it briefly. 2
b) Draw a reproductive system of a bull with marking different organs and mention its differential points with dogs. 3
2. a) What are the methods for semen preservation? Write down the protocol for cryo-preservation of semen. 1+2=3
b) Evaluate the minimum standard criteria for reporting a bull to be fit for breeding. 3
3. a) Describe the procedure of measuring the concentration and motility of spermatozoa. 3
b) Enlist the methods of semen collection. Briefly state the procedure of semen collection in bull. 1+2=3
4. a) Mention the normal concentration of spermatozoa in bull, ram, stallion and dog. How does testis control its temperature lower than body temperature? 1+2=3
b) What is blood testis barrier? How will you perform AI in a cow? 1+2=3

SECTION-B

5. a) Define semen. State the seasonal effects on spermatogenesis in ram and buck. 3
b) Name four commercial semen diluents. Compare the benefits of AI with natural mating. 1+2=3
6. a) Define IVF, ICSI, MOET and IVM. 2
b) Write down the causes of infertility in a male animal. How can you minimize this infertility? 4
7. a) Enumerate the semen borne diseases. How will you prevent the transmission of semen borne diseases? 1+2=3
b) State the features of an ideal semen diluent. Make 200 ml Tris citrate egg yolk base semen diluent for bull semen preservation. 1+2=3
8. Write short notes on (any three): 3×2=6
 - a) Cryptorchidism
 - b) Phimosis and paraphimosis
 - c) Management of LN₂
 - d) Sperm sexing

Chattogram Veterinary and Animal Sciences University

DVM 4th year 2nd Semester Final Examination 2022

Subject: Animal Biotechnology (Theory)

Course Title: ABT-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 no. 1 is compulsory. Use separate answer script for each section. Fractions of the questions must be answered together)

SECTION-A

1. a) Explain the term "Animal Biotechnology". Briefly describe the applications of biotechnology for livestock improvement. 3.0
b) State the different categories of biotechnology. 2.0
2. a) What do you mean by "Artificial Insemination"? 1.0
b) "Artificial Insemination" is superior to natural breeding- Explain. 2.0
c) What is frozen semen? Write down the procedure of freezing of semen. 3.0
3. a) Define Multiple Ovulation and Embryo Transfer (MOET). State the importance of MOET in cattle production. 3.0
b) Briefly state the steps of MOET for cattle production. 3.0
4. a) What is transgenesis? State the significance of producing transgenic animals. 3.0
b) Write down the procedure of freezing semen. *and its application.* 3.0

Principles

SECTION-B

5. a) List the tools of genetic engineering with their application(s). 2.0
b) Differentiate gene cloning from reproductive cloning. 2.0
c) Write down the procedure of gene cloning. 2.0
6. a) What is DNA sequencing? Write down the process of next generation sequencing technology. 4.0
b) Explain the term "Gene Therapy". 2.0
7. a) What is IVF? Write in brief the steps of IVF. 3.0
b) State the significance of estrus synchronization in dairy industry. 3.0
8. Write short notes on any 3 (three) from the followings 3×2=6.0
 - a) Recombinant DNA technology.
 - b) Embryo sexing.
 - c) Importance of database and tools used in bioinformatics.
 - d) Uses of CRISPR-Cas9 in cattle.

Chattogram Veterinary and Animal Sciences University
DVM 4th Year 2nd Semester Final Examination-2022
Course Title: Zoo and Wild Animal Medicine (Theory)
Course Code: ZWM-402 (T)
Full Marks: 35, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer **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) Differentiate zoo medicine from wildlife medicine. 2
- b) What is meant by the term 'endangered' and 'IUCN'? Enlist five endangered wildlife of Bangladesh. 1+1=2
- c) Mention the protected areas of Bangladesh. Write down the role of zoo vets for the conservation of wildlife in Bangladesh. 1+3=4
2. a) What is egg binding? Write down the etiology, symptoms, diagnosis, treatment and management of egg binding in reptiles. 1+3=4
- b) Write down the etiology, clinical findings, diagnosis and treatment of crop impaction in parrots. 3
- c) Mention the etiology and treatment of clubbed feet in an ostrich. 2
3. a) Describe the etiology, clinical findings, postmortem lesions, diagnosis and treatment of Johne's disease in a giraffe. 4
- b) Write down the etiology, clinical signs, postmortem lesions and treatment of bacterial enteritis in a gorilla. 3
- c) Write a prescription for a cassowary of 50 kg body weight suffering from nutritional roup. 2

SECTION-B

4. a) Mention 10 (ten) bacterial diseases of reptiles with etiology, clinical signs and therapy in a tabular form. 4
- b) How will you protect the elephants from rabies infection in a safari park? 2
- c) Write down the etiology, clinical signs, postmortem lesions, treatment and control of Newcastle disease in ostrich. 3
5. a) Write down the etiology, clinical signs, treatment and control measures of anthrax in Asian elephants. 4
- b) Enumerate the etiology, clinical signs, postmortem lesions and treatment of Chlamydophilosis in hill mynah. 3
- c) Describe the etiology, clinical findings and treatment of salmon poisoning in fox. 2
6. a) Briefly describe the different restraining methods used in zoo and safari park. 4
- b) Mention the etiology, synonyms, clinical findings, postmortem lesions, diagnosis, treatment and control of lumpy jaw in koalas in a zoo. 3
- c) Write down the etiology, transmission, clinical signs and treatment of gray patch disease in green sea turtle. 2