

# Chittagong Veterinary and Animal Sciences University

M S in Animal and Poultry Nutrition

July-December Semester Final Examination 2018

**Course title: Nutrition and Reproduction**

Course Code: NRP-601

Total marks: 40

Time: 2 hour

Answer any **2 (two)** questions from the following. Values are indicated in the right margin in each question.

1. a) Distinguish between Nutrition and Reproduction. Draw neat diagram of cow's reproductive organ with its primary function(s). 6
- b) Calculate nutritional requirement of 120 days pregnant cow having 420 kg live weight and are producing 16 liter milk daily. 8
- c) List the feeding standard those are usually used for cow's ration formulation. Describe any one of them with it's advantages and disadvantages. 6
2. a) Differentiate between functional and biological timeframe traits of cows. 4
- b) What is fertility? Write how you will analyze the dairy herd fertility under cooperative dairying conditions of Bangladesh? 10
- c) What do you mean by the term of useful life of a bull? How you will utilize a breeding bull during breeding season. 6
3. a) What do you mean by the term value of milk? Briefly write the causes of variation in the yield and composition of milk from cow. 8
- b) How will you examine the breeding soundness of a bull? Narrate a ration for 4 yrs old bull having 600 kg live weight and dairy live weight gain is 750g and which are using semen collection twice per week and ejaculate volume is 10 ml. 12

Department of Animal Science and Nutrition  
Chittagong Veterinary and Animal Sciences University  
MS in Animal and Poultry Nutrition  
Semester Final Examination (July-December 2018)  
**Course Title: Lab, Pet and Wild Animal Nutrition (Theory)**  
Course code: LPW-602, Full marks: 40, Time: 2 hours

**Figures in the right margin indicate full marks. Answer any four (4) questions. All questions must be answered chronologically!**

1. Discuss the principles of feeding lab, pet and wild animals. How do they differ from domestic animals? What should you consider for selecting feeds for them? 10.0
2. Give the ingredient specifications and diets formulations for young, adult and pregnant lab, pet and wild animals? 10.0
3. Discuss the characteristics of diets for wide ranges of captive animals kept in zoo. How do their diets differ from wild animals? 10.0
4. Discuss the common nutritional problems of pet and zoo animals. How should you cure them? 10.0
5. How do post operative diets differ from regular menu? How should you manage nutrition of zoo and wild animals under adverse conditions? 10.0

**Department of Animal Science and Nutrition**  
**MS in Animal and Poultry Nutrition**  
**Semester Final Examination 2018**  
**Semester: July-December 2018**  
**Subject: Animal Products in Human Nutrition (APN-602)**

**Answer to the following questions (Any Four). Figures in the right margin indicate full marks.**

**Full marks: 40**

**Time: 2 hour**

1. a) Write down the structure and properties of cholesterol. Mention the biosynthesis process and functions of cholesterol. 5.0  
5.0
- b) State the importance and adverse effect of cholesterol. What are the managements of reducing high cholesterol.?
2. a) Mention the importance of meat, milk and egg for children with adequate requirement. 5.0
- b) List out the bioactive compounds present in milk and egg. How they are beneficial for human body? 5.0
3. a) Shortly describe the present, past and future status of animal products. 5.0
- b) List out the hormones that are used in animal production. Explain their health hazards and alternative use in animal feed. 5.0
4. a) Explain about the saturated and unsaturated fatty acid for human health. 5.0
- b) Describe about the residual effects of antibiotics on human health. 5.0
5. Write short notes on (Any Two): 5.0x2= 10.0
  - a) Omega-3 and Omega-6 fatty acid for human health
  - b) Functions of phospholipids
  - c) Importance and composition of meat in human diet

-----Good luck-----

**MS in Animal and Poultry Nutrition Final Examination**  
**July to December Semester/2018**  
**Sub: Forage Production and Grassland Management**  
**Course code: FGM-602**  
**Marks: 40 Time: 2 hours**

(Answer any four questions from the following in which Q no 1 is compulsory. Figure in the right margin indicates full marks)

1. a. Mention the present status and scope of Forage/ Fodder production in developing countries like Bangladesh 4.0  
b. Discuss briefly about the morphology, fertilizer dose, time and method of sowing, management and utilization, yield and nutritive value of German, and Ipil-ipil fodder. 6.0
2. a. What do you mean by Grassland Agriculture and Grassland farming? Write in brief about grassland management. 4.0  
b. Classify Grasslands according to WWF (World Wide Fund for Nature) and discuss briefly about Flooded grasslands and Montane grassland. 6.0
3. a. Mention how will you preserve the non-legume fodder and Justify your answer. 5.0  
b. Discuss briefly about three unconventional feed in dairy cattle with their uses and nutritive value. 5.0
4. a. Describe shortly about the poisonous plant available in Bangladesh for animals. 4.0  
b. Indicate the name of different grazing system and discuss briefly about two grazing system which are suitable in Bangladesh 6.0
5. Write short notes on (Any Four) 2.5x4 =10
  - a. Grassland ecology
  - b. Biochemical changes in ensiling
  - c. Maize fodder cultivation
  - d. Savannahs
  - e. Grain processing method

Department of Animal Science and Nutrition  
Chittagong Veterinary and Animal Sciences University  
MS in Animal and Poultry Nutrition  
Semester Final Examination (July-December 2018)  
**Course Title: Ruminant Nutrition (Theory)**  
Course code: RNT-602, Full marks: 40, Time: 2 hours

**Figures in the right margin indicate full marks. Answer any four (4) questions. All questions must be answered chronologically!**

1. Fiber fermentation in the rumen'-Havoc or breakthrough? What do you expect to happen while adopt nutritional strategy to minimize emission of methane and CO<sub>2</sub> from rumen? How and when fiber fermentation is impaired by dietary protein level? 10.0
2. Discuss the mode of utilization of ADF, NDF, eNDF and peNDF for adult ruminants? What are the factors you should consider to ensure optimization of fiber utilization in ruminants? How dietary fibre for ruminants interfere public health? 10.0
3. Is there any association among sub-acute ruminal acidosis (SARA), acute ruminal acidosis (ARA), chop length and eNDF content of a dairy ration? Why do SARA turns to ARA? How do ARA provoke sub-clinical lameness in crossbred Friesian cows? 10.0
4. Under which specific circumstance supplementation of UDP is truly a noble approach? Is there any way to ignore RDP irrespective of milk yield and productivity in ruminants? Summarize the strategy to optimize availability of dietary nitrogen in ruminants. 10.0
5. 'NRC or ARC or Thumb rule' which one is really a noble approach under current perspective of Bangladesh? Which feeding system would be most applicable for high yielding crossbred dairy cows for commercial dairy farms in Bangladesh? 10.0

Department of Animal Science and Nutrition  
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MS in Animal Science  
Semester Final Examination (July-December 2018)  
**Course Title: Biotechnology in Animal Science (Theory)**  
Course code: BAS-602, Full marks: 40, Time: 2 hours

**Figures in the right margin indicate full marks. Answer any four (4) questions. There is no way to consider fragmented answers!**

1. “Near Infra Red Spectroscopy (NIRS)”-Is it a hypothetical dream or a real breakthrough in the history of animal nutrition? What are calibration drawbacks of NIR compared to traditional wet chemistry and how do you think to resolve them? 10.0
2. Despite spectrophotometric techniques, why has atomic absorption spectroscopy been evolved in the field of feed industry? What are the principle, merits and demerits of this technique? 10.0
3. What are the implications of *in vitro* Menke’s gas technique in ruminant research? How should you proceed to estimate degradability of organic matter (DOM) for dried poultry manure in Menke’s gas technique? 10.0
4. Why dacron bag technique is neither an *In vivo* nor an *In vitro* technique? Discuss the implications and drawbacks of the technique? Under existing set up, *in vivo*, *in vitro* or *in sacco* - which technique will be more feasible for CVASU? 10.0
5. How does respiration calorimetry work? What are the implications, merits and demerits of respiration calorimetry? Why NE is mostly ignored for feeding cattle in developing countries? 10.0

# Chittagong Veterinary and Animal Sciences University (CVASU)

Department of Animal Science and Nutrition

MS in Animal Science

Second Semester (Jul to Dec) Final Exam 2018

**Course Title: Livestock Business Management**

**Course Code: LBM-602**

**Total Marks: 40, Time: 2.00 Hours**

## Instructions:

- *Answers should be **specific and brief**.*
- *Split answers are highly discouraged.*
- *Please answer to any 4 (four) from the below questions.*

- 1) A) Define Management. 2  
B) Mention the major farm-business decisions a manager must consider. 4  
C) Show the general skills you need to develop to be a good manager. 4
- 2) A) Demonstrate the Strategic Management Process. 3  
B) Develop a Mission Statement and a Vision Statement for a hypothetical Dairy Processing Plant. 3  
C) Set 5 (five) SMART Objectives for a Dairy Processing Plant for the first year of the operation. 4
- 3) A) Calculate ROI from a hypothetical example of a Dairy Farm. 6  
B) Analyze your personal SWOT as a Vet Graduate. 4
- 4) A) Demonstrate the steps in organizing. 4  
B) Identify the elements of directing. 3  
C) Summarize the Control Process. 3
- 5) A) Explain the factors you will consider while hiring a personnel. 3  
B) Mention the content titles of a typical Business Plan. 4  
C) The company's product promised to a major customer is running late and there was intense pressure on the production team to deliver the product. The Direction of Production was eventually told by the company President to "deliver or else." The Director therefore decided to ship the product, even though it had not gone through all its testing procedures. Members on the product team were angry by the uncertainty in the functionality and reliability of the shipped product. The Director however insisted: "We will just have to take that chance." As the Director of Production, how would you act differently? 3

**Chittagong Veterinary and Animal Sciences University**

**M S in Animal Science**

July-December Semester Final Examination 2018

**Course title: Advanced Animal Breeding**

Course Code: AAP-601

Total marks: 40

Time: 2 hour

Answer any 2 (two) questions from the following. Values are indicated in the right margin in each question.

1. a) What is Industry Structure"? Write down the close nucleus breeding scheme with its limitation for dairy development in developing countries. **08**
- b) State the cattle improvement policy-2007 in Bangladesh. Mention its prospects in cattle improvement in Bangladesh. **08**
- c) Mention the points which will you consider for making a structured genetic improvement programme for beef cattle production. **04**
  
2. a) State the term breeding objective. How will you develop this objective from a dairy herd consisting of 100 cows having average live weight is 320 kg and each cow produces 1600 liter milk and 400 kg fat per lactation. Per unit price for milk, fat and meat (live wt) is BDT 50.00, 600.00 and 180.00, respectively. **14**
- b) What is mixed model equation? Write down its application for estimating BLUP breeding values. **04**
- c) For construct a selection index list what are the factors you should consider. **02**
  
3. a) What do you mean by genetic gain? Describe in brief the causes of genetic gains of milk from cow. **6**
- b) Estimate the genetic gains for milk yield using the four path way of selection from a hypothetical dairy herd. Narrate the scenarios if the active cow population will double than the base population for selecting bull mothers. **14**



**MS in Animal Science Final Examination**  
**July to December Semester/2018**  
**Sub: Meat and Meat Products Technology**  
**Course code: MPT-602**  
**Marks: 40 Time: 2 hours**

(Answer any four questions from the following in which Q no 1 is compulsory. Figure in the right margin indicates full marks)

1.
  - a. What do you mean by Animal welfare, stress and distress, and which circumstances human are liable for animal suffering. 3.0
  - b. Discuss briefly how handling and care of animal affect the quality of meat. 7.0
2. Define Growth, Hyperplasia and Hypertrophy. Write down about the Growth & development of connective tissue and indicate the factors that influence the growth / development of skeletal muscle. 10.0
3.
  - a. Write down the possible ways of storage of meat in order maintain proper quality of meat. 4.0
  - b. Indicate the factors that affect the growth of meat spoilage and mention the symptom of spoilage of meat by bacteria and yeasts. 6.0
4.
  - a. Indicate the possible ways to decrease Foodborne Bacteria from meat. 3.0
  - b. Indicate the Illness, Causative Agent, Symptoms , Time of Onset, and preventive measure of three food infection caused by available Foodborne Bacteria in Bangladesh. 7.0
5. Write short notes on (Any Four) 2.5x4 = 10.0
  - a. Prenatal growth of meat animal
  - b. Ultra structure of skeletal muscle
  - c. Stunning of Animal for slaughter
  - d. Use of non edible by-products

**Department of Animal Science and Nutrition**  
**MS in Animal Science**  
**Semester Final Examination 2018**  
**Semester: July-December 2018**  
**Subject: Wildlife Conservation and Environment (WCE-602)**

**Answer to the following questions (Any four). Figures in the right margin indicate full marks.**

**Full marks: 40**

**Time: 2 hour**

1. a) What do you mean by animal biodiversity? Write down the importance of conserve animal biodiversity in Bangladesh and in the World? 5.0
- b) Differentiate conservation and preservation. Discuss the ecosystem approach of biodiversity conservation. 5.0
2. a) Define ecological succession. Write down the principles of animal preservation in the zoo. 5.0
- b) Represent your idea about the carrying capacity and wildlife management system. 5.0
3. a) What are the challenges of captive breeding? Briefly describe the methods of captive breeding. 5.0
- b) State briefly about the policy and acts of conservation of biodiversity. 5.0
4. a) Zoo is not only for entertainment but also for education and research- Justify. 5.0
- b) Stepwise explain the principles of establishment of a typical zoo. 5.0
5. Write short notes on (any Two): 5x2= 10.0
  - a) Environmental factors for biodiversity
  - b) Causes of wildlife extinction
  - c) CITES, WWF, SSC

-----Good luck-----

**Department of Animal Science and Nutrition**  
**MS in Animal Science**  
**Semester Final Examination 2018**  
**Semester: July-December 2018**  
**Subject: Animal By-products and Waste Management (AWM-602)**

**Answer to the following questions (Any Four). Figures in the right margin indicate full marks.**

**Full marks: 40**

**Time: 2 hour**

1. a) Shortly describe about different animal by-products and their commercial uses. 5.0  
b) How can you dispose your animal by-products at your farm? 5.0
2. a) What are the different wastes found from domestic live animal? Mention the voiding amount of manure from different animal and diseases spread from it. 5.0  
b) Write down the composition of air. State the effects of air pollution and ways to prevent of air pollution. 5.0
3. a) State briefly about the policies and penalty for water act. 5.0  
b) Give a brief explanation about environment protection act. 5.0
4. a) Explain about the importance of water in animal body. 5.0  
b) Write down the quantity of water requirements of domestic livestock 5.0
5. Write short notes on (Any Two): 5.0x2= 10.0
  - a) Methods of watering
  - b) Composition of hides and skins
  - c) Eutrophication

-----**Good luck**-----

**MS in Animal and Poultry Nutrition Final Examination**  
**July to December Semester/2018**  
**Sub: Avian Nutrition**  
**Course code: AVN-602**  
**Marks: 40 Time: 2 hours**

(Answer any four questions from the following in which Q no 1 is compulsory. Figure in the right margin indicates full marks)

1.     a.    Mention the possible ways to contaminate of Avian feed. 3.0  
       b.    Indicate the name of fungi responsible for Aflatoxicosis, Ochratoxin, Zearalenone and mention their source and effect on animal body. 7.0
  
2.            Define feed additives. Discuss in brief about different feed additives that has been usually used in poultry feed 10.0
  
3.     a.    What do you mean by restricted feeding and why it is important in chicken rearing? What are the possible ways to maintain restricted feeding in chicken? 4.0  
       b.    Write down the feeding management and nutrient requirement for Quail, Guinea fowl and Pheasant. 6.0
  
4.     a.    Write down about the feeding system/ ways of poultry feeding during heat stress. 3.0  
       b.    What do you mean by anti-nutrient component in poultry feed. Discuss briefly about the anti-nutritional compound/factor present in poultry feed and their removal/elimination technique from feed. 7.0
  
5.    Write short notes on (Any Four) 2.5x4 = 10
  - a.    Feeding management of heavy Turkey
  - b.    Vitamin Stability
  - c.    Deficiency symptom of protein, calcium and salt in poultry
  - d.    Phase feeding
  - e.    Feeding system of broiler finisher