

MS in Animal and Poultry Nutrition Final Examination
July to December Semester/2022
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)

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|----|--------------------------------|--|------------|
| 1. | a. | Indicate the factors that affect feed intake. Discuss about the feeding management of poultry during adverse environment. | 5.0 |
| | b. | Write down the feeding management and nutrient requirement for Broiler starter, Quail and Guinea fowl. | 5.0 |
| 2. | a | List the anti-nutrient available in Avian feed. Indicate the beneficial and adverse effect and possible way of elimination the common anti-nutrient. | 5.0 |
| | b | Write down the function, deficiency symptoms and sources of Vit A, Vit D, Vit E, Calcium, phosphorus and salt in chicken. | 5.0 |
| 3. | a | What is feed additives? Indicate the name and function of common feed additives use in poultry feed. | 5.0 |
| | b | Briefly discuss the effects of water & diet on egg production of avian. | 5.0 |
| 4. | a | Write down the sources and effects of Aflatoxin, Ochratoxin Zearalenone and T-2 toxin in animal body. | 7.0 |
| | b. | Discuss briefly the feeding management of Turkey. | 3.0 |
| 5. | Write short notes on (Any two) | | 5.0x2 = 10 |
| | a. | Vitamin stability | |
| | b. | Restricted feeding | |
| | c. | Factors that affect water intake of Avian | |

Chattogram Veterinary and Animal Sciences University

M S in Animal and Poultry Nutrition

July- December Semester Final Examination 2022

Course Title: Reproduction and Nutrition

Course Code: RPN-602

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) Nutrition is essential for successful reproduction - Justify. **3.0**
- b) Formulate a ration for a late pregnant cow having 320 kg live weight and daily weight gain of 250g and the cow produces 12 liters of milk daily. **12.0**
- c) Mention the factors for feed intake of a cow with its application for ration formulation. **5.0**

2. a) Describe the BCS are the important criteria for breeding cows and bulls. **5.0**
- b) How you will analyze the dairy herd fertility under intensive dairying conditions. **8.0**
- d) Feeding standards are tables - justify? Describe a feeding standard with its' advantages and disadvantages. **7.0**

3. a) What is milk? Briefly write the causes of variation in the yield and composition of milk from cow. **5.0**
- b) Describe the pre-breeding and breeding management of a breeding bull. **5.0**
- c) Narrate a ration for a 4-year-old bull having 750 kg live weight and dairy live weight gain is 220 g, which is using semen collection twice per week for artificial breeding and the ejaculate volume is 10 ml. **10.0**

MS in Animal and Poultry Nutrition Final Examination
July to December Semester/2022
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)

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|----|---------------------------------|---|---------|
| 1. | a. | What do you mean by pasture and grassland? Write down the importance of grassland. | 4.0 |
| | b. | Classify grassland according to WWF and discuss briefly the management procedure of grassland. | 6.0 |
| 2. | a. | What is grassland ecology and how does it maintain? | 3.0 |
| | b. | List the toxic plants available in Bangladesh and indicate the toxic dose, clinical signs and treatments of common five toxic plants. | 7.0 |
| 3. | a. | Discuss briefly about the morphology, fertilizer dose, time and method of sowing, management, utilization, yield and nutritive value of Alfa Alfa, Centro, Maize and para fodder. | 6.0 |
| | b. | Discuss about the continuous, Zero and deferred grazing. | 4.0 |
| 4. | a. | Mention the sources, factors, clinical sign and treatment of Lead and Arsenic poisoning in Animal. | 4.0 |
| | b. | Indicate the name of available methods for improvement the nutritive value of roughage and discuss briefly three (3) methods. | 6.0 |
| 5. | Write short notes on (Any Two): | | 5x2 =10 |
| | a. | Unconventional feed | |
| | b. | Jumboo fodder cultivation | |
| | c. | Prospect of Fodder cultivation in Bangladesh | |

Department of Animal Science and Nutrition
Chattogram Veterinary and Animal Sciences University
MS in Animal and Poultry Nutrition
Semester Final Examination (July-December 2022)
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. How do rumen microbes derive nourishment from the environment? 10.0
What are the consequences of fiber type and roughage to concentrate ratio on dynamics of rumen environment?
2. What factors should you consider to ensure optimization of fiber utilization in ruminant animals? How do forage to concentrate ratio affect ruminant and interfere the public health issues? 10.0
3. Is there any connection among sub-acute ruminal acidosis (SARA), chop length and $peNDF$ content of a dairy ration? How does ARA provoke sub-clinical lameness in crossbred dairy cows? 10.0
4. Under which circumstances feeding of UDP rich supplements is truly a noble approach? Do you think supplying RDP in ruminants is simply a wastage? How carbohydrate and trace minerals help optimize the availability of dietary nitrogen in the ruminant animals? 10.0
5. Is forage dietary essential for ruminant animals? How should you formulate least cost ration for the crossbred commercial dairy cattle of Bangladesh? Which feeding system is most appropriate for them? 10.0

Chittagong Veterinary and Animal Sciences University
Department of Animal Sciences and Animal Nutrition
M.S. in Animal and Poultry Nutrition
Semester(July-December) final examination-2022
Sub: Animal Products in Human Nutrition (T)
Full marks-40

Answer any four questions from the following

1. a) Describe the importance of animal Products in human Nutrition. 5
b) Mention the present and future status of animal products. 5

2. a) Write down the role of saturated fatty acid in human health 5
b) Describe about the importance of unsaturated fatty acid. 5

3. a) Mention the cholesterol level of various animal products. 5
b) Write down the effect of cholesterol level on human health. 5

4. a) Describe about the importance of meat, milk and egg on human health. 5
b) Mention the lethal effect of meat, milk and egg. 5

5. Mention the nutritional requirement and diet chart for different age group people. 10

Department of Animal Science and Nutrition
Chattogram Veterinary and Animal Sciences University
MS in Animal and Poultry Nutrition Final examination
July to December Semester 2022
Subject: **Lab. Pet and Wild Animal Nutrition (LPW-602)**
Full marks: 40, Time: 2 hours

Figures in the right margin indicate full marks. Answer any **FOUR** from the following questions. Fragmented answers will not be taken into consideration.

1. a) Briefly discuss germ free diet, specialized diet and purified diet for pet animals. 5.00
- b) Classify types of pet food with example in each case. Enlist the toxic foods for dog. 5.00
2. a) Write down the nutrient requirements with feeding practices of laboratory guineapig, rabbit and mice. 10.00
3. a) Enlist the governing agencies of commercial pet food and available pet food company in Bangladesh. 5.00
- b) Write down the requirements for labeling of a commercial dog food. 5.00
4. a) Write down the characteristics of diet for Zoo animals. 3.00
- b) As a zoo veterinarian what are the common nutritional problems found among zoo animals. 7.00
5. Write down the short note on: i) Obesity in dog and cat, ii) Diabetes in dog 10.00

MS in Animal Science

Department of Animal Science and Nutrition

Semester Final Examination 2022

Subject: Wildlife Conservation and Environment (WCE-602)

Semester: July-December 2022

Total Marks: 40.00

Time: 2 hours

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

1. a) Write in details about the contribution of wildlife for human existence. 5.0
b) Differentiate between conservation and preservation of wildlife. Describe briefly about the causes of wildlife extinction in the world. 5.0
 2. a) What do you mean by environmental enrichment? Explain on your words. 5.0
b) What are the challenges of captive breeding? Briefly describe the methods of captive breeding. 5.0
 3. a) Write down the name of five international regulatory bodies for wildlife conservation with their elaboration, mission, vision and objectives. 5.0
b) What is wildlife biodiversity? Discuss different types of wildlife biodiversity. 5.0
 4. a) Shortly describe the major reasons for biodiversity depletion in Bangladesh. 5.0
b) Define conservation biology. Explain in situ and ex-situ conservation system. 5.0
 5. a) Describe briefly about the ways of wildlife conservation and habitat management. 5.0
b) Explain in own words about the causes wildlife extinction. 5.0
 6. a) Write down about the human versus wild life conflict in Bangladesh. 5.0
b) What do you mean by poaching? Describe briefly about the wildlife poaching in Bangladesh. 5.0
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Department of Animal Science and Nutrition
Chattogram Veterinary and Animal Sciences University
MS in Animal Science
Semester Final Examination (July-December 2022)
Course Title: Animal Welfare (Theory)
Course Code: ANF-602- (T), Full marks: 40, Time: 2 hours

Figures in the right margin indicate full marks. Answer any four (4) of the following questions. Split answers are strongly discouraged.

1. a) Explain how animal welfare is differed from animal right by principle. Briefly discuss the principal components of animal welfare. 5
- b) State the possible reasons of cruelty against stray animals. Provide some examples of major reported incidents of cruelty to stray animals in Bangladesh. 5
2. a) Briefly discuss the actions that are considered as ‘unnecessary cruelty to animal’ according to the jurisdiction of animal welfare act 2019. 5
- b) What do you mean by maiming of animal? State the penalties for various cruelties to animal according to the jurisdiction of animal welfare act 2019. 5
3. a) Discuss the role of the hypothalamic-pituitary-adrenal axis in neuroendocrine responses to stress. 5
- b) State the possible ways to improve animal welfare by better attention to disease management. 5
4. a) Discuss the various type of welfare violations during long-distance transportation of meat animal in Bangladesh. 5
- b) Briefly discuss the components of captive wild animal welfare assessment. 5
5. a) Discuss the welfare issues in current day’s commercial production of layer birds. 5
- b) State your opinion on free-range commercial poultry rearing considering welfare and profitability. 5

MS in Animal Science
Department of Animal Science and Nutrition
Semester Final Examination 2022
Subject: Meat and Meat Products Technology (MPT-602)
Semester: July-December 2022

Total Marks: 40.00

Time: 2 hours

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

1. a) What is the present situation of meat industry in Bangladesh? Write down the potentials and scope of developing meat industry in Bangladesh. 5.0
- b) What do you mean by meat animal welfare? Discuss briefly about the welfare of meat animals during transport, slaughter and keeping for farming. 5.0
2. a) Differentiate between muscle and meat. Shortly describe process of conversion muscle to meat. 5.0
- b) What is the importance of ante-mortem and post-mortem inspection? Shortly describe the procedure of post-mortem inspection of carcass. 5.0
3. a) Differentiate between slaughtering and stunning. Shortly describe the process of slaughtering by Muslim or Halal method. 5.0
- b) Define curing. Describe the process of curing using different salts. Mention the carcinogenic effects of nitrite/nitrate. 5.0
4. a) What are the objectives of packaging? Mention the criteria of packaging materials. Explain the effects of single and multi-layer films of packaging. 5.0
- b) State different types of slaughter house by-products with their possible uses. 5.0
5. a) Design a modern slaughterhouse or an abattoir. 5.0
- b) Illustrate the growth and development of meat animals. 5.0
6. a) What do you mean by meat fermentation? Write down the importance of fermented meat and microorganisms used in meat fermentation. 5.0
- b) Shortly describe the factors affecting the quality of fermented meat products. 5.0

Chattogram Veterinary and Animal Sciences University

M S in Animal Science

July-December Semester Final Examination 2022

Course title: Advance Animal Breeding

Course Code: AAP-602

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 breeding goals and breeding schemes. List the breeding schemes for sire selection. **3.0**
- b) Indicate the current dairy cattle breeding policy in Bangladesh. Write the drawbacks and prospects of this policy for dairy development. **7.0**
- c) What is breeding design? How will you design a structured genetic improvement programme for dairy development in Bangladesh. **10.0**

2. a) What is the breeding objective? How will you develop the breeding objective from a dairy herd consisting of 100 cows having an average live weight is 270 kg and each cow produces 2000 liter milk and 90 kg fat per lactation? The per unit price for milk, fat, and meat is Taka 72/=, 650/= and 550/=, respectively. **8.0**
- b) What is the mixed model equation? Write down its application for estimating BLUP breeding values. **4.0**
- c) What do you mean by genetic gain? List the causes of genetic gains of milk from a cow. Estimate the genetic gains for milk yield using the bull-to-cow and cow-to-cow pathway of selection from a hypothetical dairy herd. **8.0**

3. a) Distinguish between selection and culling? Write down the importance of selection. **4.0**
- b) Why selection index is the best method among the different selection methods? Justify. **4.0**
- c) Construct the selection index using the traits under the objective of meat production. **12.0**

Department of Animal Science and Nutrition
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MS in Animal Science

Semester Final Examination (July-December 2022)

Course Title: Animal By-products and Waste Management (Theory)

Course Code: AWM-602 (T), Full marks: 40, Time: 2 hours

Figures in the right margin indicate full marks. Answer any four (4) of the following questions. Split answers are strongly discouraged.

1. a) List the slaughterhouse by-products with their potential uses. Why it is worthy to extract some biochemical compounds from slaughterhouse by-products rather than synthesis in the laboratory? 5
- b) State the criteria for the site selection to established an abattoir. 5
2. a) Classify tanning agents with examples. State the physical and chemical changes in hides and skins by tanning. 5
- b) Briefly discuss the meat and bone meal rendering system using slaughterhouse by-products. 5
3. a) State the principles and reactions by which abattoir waste can be converted into biogas and biodiesel. 5
- b) Briefly discuss the most common preservation method of hides and skins in Bangladesh. 5
4. a) State the 'Tanyard Processes' of hides and skins tanning. 5
- b) Draw and label a layout for a modern abattoir. 5
5. a) Explain the multi-stage integrated system to treat abattoir waste water with diagrams. 5
- b) Write down the principles and procedures of compost making using slaughterhouse by-products. 5

Chittagong Veterinary and Animal Sciences University

Department of Animal Sciences and Animal Nutrition

M.S. in Animal Science

Semester final examination-2022

July-December'2022

Sub: Biotechnology in Animal Science (T)

Full marks-40: Time: 2 Hours

Answer any four questions from the following....

1. a) Describe about the history and scope of biotechnology in Animal Science. 5
b) Write down the procedure of cell culture. 5

2. a) Describe about the fermentation technology used in Animal Science 5
b) Mention about the fermented product used in Animal industry. 5

3. a) Describe about the production procedure of enzyme. 5
b) Write down the name of enzyme products related to animal Science. 5

4. a) Describe about the embryo transfer technology. 5
b) Mention the procedure of embryo sexing method. 5

5. Write short notes of any two 5X2=10
 - a) Genetic engineering
 - b) Probiotic and Prebiotic
 - b) DNA based animal Identification