Department of Animal Science and Nutrition
Chittagong Veterinary and Animal Sciences University
MS in Animal and Poultry Nutrition
Semester Final Examination (July-December 2016)

Course Title: Animal Products in Human Nutrition (Theory)

Course code: APN-602, Full marks: 40, Time: 2 hours

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

1. State the roles of milk, meat and egg in infant and geriatric human nutrition. Explain the role of compound lipid for efficient brain development and optimum neuronal functioning. 10.0

2. "The strategies of meat production and processing in recent days are far different from previous"- Justify the statement considering human health benefits and consumer desire. Write down the detrimental effects of hormonal residues in animal products for human health. 10.0

3. Criticize red meat considering the effects on human health. Explain when and how red meat becomes carcinogenic for human. What are the possible ways to prevent the carcinogenic effect of red meat? 10.0

4. What do you mean by bioactive compounds? Briefly discuss the specific health benefits of bovine milk other than nutritional requirements. 10.0

5. Write down the essential functions of cholesterol in human body. Explain the relationship between cholesterol and cardiovascular diseases. State the roles of essential fatty acids for the prevention of coronary heart diseases. 10.0

Department of Animal Science and Nutrition
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MS in Animal and Poultry Nutrition
Semester Final Examination (July-December 2016)
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. <u>All questions must be answered chronologically!</u>

1. 'Rumen microbes'- How do you feel they like, static or dynamic? Which factors regulate them? What are the consequences of gradually manipulating peNDF to NFE and UDP to RDP ratio on survivability and dynamics of rumen microbes? 10.0

2. 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

3. 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_2 from rumen? How and when fiber fermentation is impaired by dietary protein level? 10.0

4. 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

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

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Semester Final Examination 2016
Semester: July-December 2016
Subject: Avian Nutrition
Course code: AVN-602

Answer to the following questions (any five). Figures in the right margin indicate full marks.

Total marks: 40 **Time: 2.0 hours**

1. What do you mean by feed toxins and contaminants? Shortly describe about mycotoxins with their deleterious effect on performance of birds. 8.0
2. Shortly describe about the importance of phase feeding in laying hen. Briefly describe different problems of laying hen with general dietary involvement. 8.0
3. Write down the importance and use of soybean meal in poultry diet. Briefly describe different anti-nutritional factors present in soybean meal with their harmful effect and possible solutions for poultry diet. 8.0
4. Write down the importance and feasibility of turkey rearing in Bangladesh. Shortly describe about the diet and nutritional specification for juvenile and turkey breeders. 8.0
5. Write down the importance of production quality egg and meat. Shortly describe about the effect of feed on different egg quality in layer. 8.0
6. Mention the objectives of immunomodulation for birds. Shortly describe the methods of immunomodulation through dietary intervention like microbial products and herbal immunomodulators. 8.0
7. What are the responses of heat stress in laying hen? Briefly describe about the maintaining energy balance during heat stress for laying hen. 8.0

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Department of Animal Science and Nutrition
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Semester Final Examination (July-December 2016)

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 of the following where question no. 1 is compulsory. **All questions must be answered chronologically**. Fragmented answer will not be taken into consideration)*

1. (a) As a nutritionist, do you support replacing roughage with kitchen waste in diet of rabbit? If yes, then what kind of vegetables you may suggest and what will be feeding strategy? 6.0
   (b) Compare between nutritional management of animals under normal conditions and adverse environmental conditions. 4.0
2. (a) Are there any adverse effects of malnutrition observed in animals when kept in captivity? Draw sketches of foregut and hindgut fermentation by herbivores. 5.0
   (b) Write down the strategies to be followed during feeding of captive herbivores and carnivores. 5.0
3. (a) What kind of feeding management you should consider for dog after any major surgery? 5.0
   (b) Give an idea about special diet and practices followed for dog during different physiological conditions and diseases. 5.0
4. (a) Is there any difference between starvation and inanition? Give a brief explanation about common nutritional problems observed in a zoo. 5.0
   (b) Explain the basic principles of feeding and nutritional requirement for wild birds. 5.0
5. (a) State the dietary needs of dogs during different stages of life cycle. Describe the advantages of canned food over dry food. 3.0
   (b) Are there any differences between nutritional management of dog and cat? Mention the dietary need of the chondroprotective agents, antioxidants, herbs and botanicals, flavours and colors in pet feed. 7.0

Chittagong Veterinary and Animal Sciences University

M S in Animal and Poultry Nutrition

July-December Semester Final Examination 2016

Course title: Nutrition and Reproduction

Course Code: NRP-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) What do you mean by the term Reproductive Nutrition? Draw neat diagram of cow's reproductive system and mention the role of nutrition for its development. **8**

   .b) Calculate nutritional requirement of a late pregnant cow having 350 kg live weight and currently the cow producing 12 liter milk daily. **8**

   c) Mention the factors for feed intake of a cow with its application for ration formulation. **4**

2. a) Describe the biological framework those determine the cows herd fertility. **7**

   b) Write how you will analyze the dairy herd fertility under cooperative dairying conditions of Bangladesh? **8**

   c) What is feeding standard? Distinguish between ARC and AFORC. **5**

3. a) What is the value of milk? Briefly write the causes of variation in the yield and composition of milk from cow. **6**

   b) Describe the pre-breeding and post breeding management of bull. **4**

   c) List the characteristics for a breeding bull. Narrate a ration for 3.5 years old bull having 450 kg live weight and dairy live weight gain is 350g and which are using semen collection twice per week and ejaculate volume is 8ml. **10**

MS in Animal and Poultry Nutrition Final Examination

Jul - Dec ~~January to June~~ Semester 2016

Subject: **Forage production and grassland management (FGM-602)**

Total Marks: 40. Time: 02 hours

Answer any **FIVE (05)** from the following questions. Figures in the right margin indicate full marks.

1. a) What is silage? Discuss the possible ways of losses of nutrients in hay making? 4

   b) Define NCFR. List the potential sources of NCFR available in Bangladesh with their importance in livestock feeding. 4

2. a) What is P/E ratio? Briefly discuss its importance in feeding animal for better production? 4

   b) Shortly state the use of herbs as cattle feed as well as a growth promoter. 4

3. a) Discuss how silage is preserved chemically. 4

   b) What is VFA? Discuss the use of organic acid in grass preservation. 4

4. a) Define grassland agriculture. Discuss a typical grassland ecosystem. 4

   b) Briefly discuss the factors affect the nutritional value of grassland and management system. 4

5. a) What is pasture? Briefly discuss the pasture based feeding system in ruminant. 4

   b) Briefly discuss the high yielding varieties of grasses available at Chittagong region. 4

6. a) What is intercultural operation? Write down its importance for forages and grass production. 4

   b) What is pasture? Briefly discuss different types of grazing system. 4

7. Write short notes on (any four) 2×4= 8

   a) Grassland farming

   b) Haylage, Beleage and Integrated farming.

   c) Non legume potential fodders in Bangladesh.

   d) Herbal prebiotics in feeding livestock and poultry.

   e) Ways of preservation of surplus forages at farmers' level.