

Chittagong Veterinary and Animal Sciences University
Department of Dairy and Poultry Science
Semester Final Exam of MS in Poultry Science (January-June/2014)
Course Code: ABS-601, Course Title: Advanced Biostatistics
Full Marks: 40 Time: 2 hours

[Answer any five questions. Figures in the right margin indicate full marks. Split answering is not recommended]

1.	a. Define and classify factorial experiment design.	2																
	b. Write down the treatment combinations of 2^3 , 2^4 and 3^2 factorial designs.	3																
	c. Define cross-over design with example. Define sequence and period. Write down the layout of 3- period and 3- treatment cross-over design.	3																
2	a. What is non-parametric test? Enlist the advantages and disadvantages of non-parametric test.	3																
	b. Write down the steps of conducting kruskal wallis test.	3																
	c. Give an example of sign test for two correlated samples.	2																
3	a. Define and classify of life table. Write down the assumptions and uses of life table.	3																
	b. Define birth rate, death rate, fertility and mortality	2																
	c. Given the following table for l_x , the number of day old chicks living at age x, complete the life table for day old chicks.	3																
	<table border="1" style="margin-left: auto; margin-right: auto;"> <tbody> <tr> <td>x</td> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> <tr> <td>l_x</td> <td>100</td> <td>90</td> <td>80</td> <td>75</td> <td>60</td> <td>30</td> <td>0</td> </tr> </tbody> </table>	x	0	1	2	3	4	5	6	l_x	100	90	80	75	60	30	0	
x	0	1	2	3	4	5	6											
l_x	100	90	80	75	60	30	0											
4	a. What do you mean by sampling error and non-sampling error?	2																
	b. Define stratified random sampling with example. Write down the advantages and disadvantages of this design.	3																
	c. What are the differences between cluster sampling and stratified random sampling?	3																
5	a. Define vital statistics. Discuss the method of obtaining vital statistics.	3																
	b. What are the assumptions behind of non-parametric test?	2																
	c. Write down the advantages of split plot design over randomized block design.	3																
6	Write short notes any of the two	2x4=8																
	a. Cluster sampling b. Friedman test c. Split- Plot Design																	

Chittagong Veterinary and Animal Sciences University
MS in Poultry Science
January- June semester final examination-2014
Subject: Poultry Breeding
Course Code: PBR-601
Full Marks: 40 ; Time: 2 hours

Answer any **four** questions from the followings. Figures in the right margin indicate full marks

1. Write a short note about importance and scope of Poultry Breeding. **10**
2. How you will measure economic traits of poultry? **10**
3. What is combined selection? Write a short note about Osborne Index. **10**
4. What do you mean by the term "Class"? Describe about several classes of chicken. **10**
5. How you will produce a broiler strain? **10**
6. Discuss about methods of mating of poultry. **10**

Chittagong Veterinary & Animal Sciences University
MSc in Dairy Science

January - June Semester, 2014

Sub: Dairy Chemistry; Course Code: DCH 601

Total Marks: 40

Time - 2 hrs.

Answer any four questions.

1. (a) State the analytical composition of Casein. — 3.0
(b) What are common protein products made from bovine milk. State the biochemical composition of any two of them. — 4.0
(c) Write a note on "bovine immunoglobulins". — 3.0
2. (a) State the composition of milk-fat. — 3.0
(b) What are the common milk fat constants? State their uses in dairy chemistry. — 4.0
(c) State the chemical reactions that glycerides undergo in lysoytic rancidity. — 3.0
3. (a) What do you mean by oxidative deterioration in milk? — 2.0
(b) State different factors that affect the oxidative deterioration in milk. Briefly describe them. — 6.0
(c) State the common carbonyls found in auto oxidized dairy products. — 2.0
4. (a) What do you mean by ripening in dairy products? — 2.0
(b) State the chemistry of curd formation during making yogurt. — 6.0
(c) State the physical properties of lactose in milk. — 2.0
5. (a) What do you mean by ~~the~~ aroma in dairy products? — 2.0
(b) What are the common aroma found in ripened dairy products? — 2.0
(c) Show the formation of diacetyl in ~~cream~~ ghee. — 6.0
6. (a) What are the common radio active materials found in milk? State their sources. — 2.0
(b) State the common procedures for detecting radioactive materials in milk. — 6.0
(c) Enumerate the common control measures for them — 2.0
7. ~~Write~~ Write short note (any four) 4 x 2.5 = 10
(a) Iodine number, (b) Phosphate Pentose Pathway, (c) Chemical Properties of milk, (d) Relationship of dairy chemistry with dairy technology, (e) Lactoperoxidase, (f) Lactin, (g) Ripeness in milk.

07/05/2014

Chittagong Veterinary and Animal Sciences University

MS January-June Semester 2014 Final Examination

M. S. in Dairy Science

Course Title: Functional Dairy Ingredients (Theory), Course Code: FDI-601

Full Marks: 40, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer any FOUR questions of which question number 3 is compulsory)

1. a) What is gut microbiota? 2
b) What are the interactions between gut microbiota and host? 4
c) Discuss the role of microbiota in inflammatory bowel disease. 4
2. a) Define Probiotics, Prebiotics and Symbiotics with example. 3
b) What is the mode of action of antimicrobial compound produced by LAB? 7
3. a) What is functional dairy food? Briefly describe the history of functional food. 3
b) What are the potential health benefits of milk and milk products? 5
c) Which bioactive components found in milk and milk products. 2
4. a) What is CLA and bioactive peptide? 3
b) How they can function in the body? 3
c) Sketch the relationship between bioactive function and milk components. 4
5. a) What is bioactive compound? 3
b) How these compounds protect from cancer? 3
c) Briefly describe the mode of action of bioactive compounds. 4

Chittagong Veterinary and Animal Sciences University

MS January-June Semester 2014 Final Examination

M. S. in Dairy Science

Course Title: Quality Control of Dairy Products (Theory), Course Code: QCD 601

Full Marks: 40, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer any FOUR questions of which question number 6 is compulsory)

1. a) Why do we need a quality control system for dairy products? 3
b) Briefly describe hygiene and occupational safety in a dairy plant. 7
2. a) What is CIP? 3
b) Describe the ideal procedure of CIP in dairy processing plant. 7
3. a) What do you mean by waste management of dairy plant? 3
b) Sketch the process of waste management and treatment. 7
4. a) Briefly describe the standards of different dairy products. 3
b) Enlist the main international standards and statutes. 2
c) Briefly describe the HACCP in dairy processing plant. 5
5. a) Enlist the different defects of Butter, Dahi and Cheese with their remedies. 7
b) How to judge the Ice Cream, Cheese and Butter? 3
6. a) Briefly describe the quality control of dairy products on the farm and at milk collection centers. 4
b) How can you produce the hygienic milk? Briefly discuss. 4
c) Briefly describe the four basics of cleaning. 2

Department of Dairy and Poultry Science
Chittagong Veterinary and Animal Sciences University
MS in Dairy Science Final Examination
January to June Semester 2014
Subject: **Dairy Nutrition (DNT-601)**
Full Marks: 40, Time: 2 hours

Figures in the right margin indicate full marks. Answer any **FIVE** from the following questions.
Fragmented answers will not be taken into consideration. 5 x 8 = 40

1. a) What do know about Probiotics, Prebiotics and Symbiotics? 3
b) Discuss about the new techniques available in dairy cattle feeding and nutrition. 5
2. a) Write short notes on NPN in dairy ration. 3
b) A grass contains 9% CP as fresh basis. The DM content of that grass is 35%.
Calculate the CP% of that grass as DM basis. 5
3. a) Write short notes on bioenergetics. 3
b) Define UDP and RDP? How UDP is utilized by ruminant? 5
4. a) Define digestibility with the factors that affect it. 3
b) Formulate a balanced ration for a dairy cow of 300 kgs body weight with 10 litres
milk production daily. 5
5. a) Briefly discuss about alkaloids. 3
b) Discuss the role of rumen microbes in fiber fermentation of ruminant. 5
6. a) Discuss about the balanced ration for a lactating pregnant cow. 3
b) Discuss gluconeogenesis. Write down the importance of Cori cycle in animal
body. 5

Chittagong Veterinary and Animal Sciences University
MS in Poultry Science final Examination
Semester: January–June 2014
Subject: Ducks & Specialized Fowl Production-Theory
Course Title: DSF-601; Total marks: 40; Time: 2 hours

Answer any five questions of the following wherein question no. 2 is compulsory; Each question has equal marks. Figures in the right margin indicate full marks

1. Describe the selection strategies and production systems for enhancing duck meat output in the world 8
2. What is integrated farming? Discuss a strategy that you would adopt to do proper utilization of space and poultry wastes for meeting high demand of protein for the consumers 8
3. What are the limitations of geese rearing in our country? Narrate the feeding, fattening, and management systems of geese production briefly 8
4. Rearing of quail in the cage system is preferable to floor system why? Rearing quail is more profitable than chicken-discuss it. 8
5. a) State the prospect of pigeon rearing in Bangladesh. Discuss the hatching and rearing management of squab 4
b) Describe the feeding and housing management system of pigeon
6. a) What strategies would you adopt to popularize guineafowl production in Bangladesh
b) Mention the prospect and problem of guinea fowl rearing in Bangladesh 4
7. a) Write down the available breeds, and breeding strategy of turkey 4
b) Discuss the productive traits, feeding and rearing strategies of turkey 4

Chittagong Veterinary and Animal Sciences University
MS in Poultry Science final Examination
Semester: January–June 2014
Subject: Poultry Farm Planning and Management -Theory
Course Title: PPM-602; Total marks: 40; Time: 2 hours

Answer any five questions of the following where question no. 5 is compulsory; Each question has equal marks, Figures in the right margin indicate full marks

- 1) What is plan, program, and organization? Discuss the general principles of farm planning 8
- 2) State the managerial roles of a poultry farm to maintain profitable production, and give a plan for maintaining strict bio-security and sanitary measurements 8
- 3) What is farm & farming system? Discuss the different factors that affect farm planning and design 8
- 4) Discuss the system properties and criteria for measurement of performance of ideal farming 8
- 5) Give an advisory plan or suggestions to a farmer who wants to produce twenty thousand day-old chicks from a breeder flock 8
- 6) Discuss market identification, benefits, and limitation of poultry farming shortly 8
- 7) Narrate the strategies or plans with which you can reduce the environmental pollution that is retrieved from poultry enterprises briefly 8
- 8) Give the schematic view with numerical calculation (**cost: benefit analysis**) for the argument that quail rearing is more profitable than chicken 8

Chittagong Veterinary and Animal Sciences University
MS in Poultry Science final Examination
Semester: January–June 2014
Subject: Poultry Processing and Products Technology-Theory
Course Title: PPT-602; Total marks: 40; Time: 2 hours

Answer any five questions of the following where question no. 1 is compulsory; Each question has equal marks, Figures in the right margin indicate full marks

1. a) Define meat, and egg? Discuss the food value of meat and eggs briefly 4
b) Describe the important parameters with which you can assess the quality of poultry meat & eggs in a nutshell 4
2. a) What is shrinkage? State the factors that affect shrinkage of broiler 3
b) Discuss the salient steps of broiler processing, and its storage and delivery systems for the national & international marketing 5
3. What is poultry carcass grading? Describe the standards or mechanisms of grading poultry (live, ready -to-cook, small/large scale operation) for marketing 8
4. a) Enumerate the poultry products (**meat and eggs**) available in the supermarket 2
b) Write down the industrial utilization and bakery uses of eggs, and state the procedure of manufacturing Turkey Ham, Turkey Salami, and Pickle Pimento Loaf 6
5. a) Mention the different methods of preservation and storage of poultry products 2
b). Describe three common methods of preserving poultry meats and eggs, respectively. 6
6. What is quality? Describe the factors that influence poultry meat quality briefly 8
7. Give short note (any five) of the following (1.6 × 5=8): 8
 - a) Egg yolk and its role on human health: b) Balut: c) Grab and Go: d) Fryer: e) Frozen egg: f) Pasteurized liquid egg, g) Chicken Nuggets: h) Functional properties of animal protein (egg): i) Uses of poultry by-products: j) Ante-mortem and post-mortem inspection of poultry

Chittagong Veterinary and Animal Sciences University
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 Full Marks: 40 Time: 2 hours

[Answer any five questions. Figures in the right margin indicate full marks. Split answering is not recommended]

1.	a. Define factorial experiment design. Write down the treatment combinations of 2^3 factorial design	2																
	b. Write down the advantages and disadvantages of factorial design.	3																
	c. Describe the procedure of 2^2 factorial design to apply in poultry science by Yate's algorithm.	3																
2	a. What is non-parametric test? Enlist the advantages and disadvantages of non-parametric test.	3																
	b. Write down the conducting steps of sign test for one sample.	3																
	c. Give an example of wilcoxon signed rank test for two correlated samples.	2																
3	a. Define and classify of life table. Write down the uses of life table.	3																
	b. Define fertility and mortality.	2																
	c. Complete the life table of the population of Leghorn, x being the age in days and $l_x=1000$ for $x=0$	3																
	<table border="1" style="margin-left: auto; margin-right: auto;"> <tbody> <tr> <td>x</td> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> <tr> <td>q_x</td> <td>0.120</td> <td>0.005</td> <td>0.010</td> <td>0.050</td> <td>0.100</td> <td>0.500</td> <td>0.8000</td> </tr> </tbody> </table>	x	0	1	2	3	4	5	6	q_x	0.120	0.005	0.010	0.050	0.100	0.500	0.8000	
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q_x	0.120	0.005	0.010	0.050	0.100	0.500	0.8000											
4	a. What do you mean by non-sampling error? List the sources of non-sampling error.	3																
	b. Define cluster sampling with example. Write down the advantages of this design.	3																
	c. How can you get stratified sample mean?	2																
5	a. Define vital statistics. Describe the methods of obtaining vital statistics.	3																
	b. Discuss the application situations of non-parametric test.	2																
	c. Write down the advantages of cross-over design.	3																
6	Write short notes on (any two):	2x4=8																
	a. Multistage sampling, b. Kruskal Wallis test and c. Cross-over design																	

Chittagong Veterinary & Animal Sciences University

M.S. in Dairy Science

January - June Semester, 2014

Sub: Dairy Technology Course Code: DTL 601

Total Marks: 40

Time: 2 hrs.

Answer any four questions.

1. (a) State the principles of preparation of cheese — 2.0
(b) State the composition and nutritive value of Cheddar cheese. — 3.0
(c) Enumerate the common defects of cheddar cheese with their remedial measures. — 5.0
2. (a) Define ghee and butter oil. — 2.0
(b) Show the compositional differences between these two dairy products. — 3.0
(c) Recommend your suggestions to increase the shelf life of ghee in open containers as well as in tinned container. — 5.0
3. (a) What do you mean by Churning? — 2.0
(b) What ~~are~~ do you mean by Phase Inversion theory? Explain. — 3.0
(c) State the procedure of making cultured buttermilk in a medium scale factory. — 5.0
4. (a) Classify cream. Is hal-and-half cream? Justify your answer. — 4.0
(b) What are the common uses of table cream? — 2.0
(c) What do you mean by over-run in butter? Why salted butter is preferred to plain butter in tropical countries? — 4.0
5. (a) Show the diagrammatic flow chart of making ice cream. — 2.0
(b) What is role of aging in preparing cup ice cream — 4.0
(c) State the principles of preparing fruit ice cream in large-scale. — 4.0
6. (a) State the concepts of Evaporated milk and Condensed milk — 2.0
(b) Present the compositions of them. State the principles of preparation of condensed milk. — 4.0
(c) What are the common defects of evaporated milk? State your suggestion to overcome them. — 4.0
7. Write short notes (any four) $4 \times 2.5 = 10.0$
(a) Planning commercial dairy plant; (b) Factors affecting quality of yoghurt; (c) Freeze drying; (d) Cultured whey; (e) Powder milk; (f) Sweetmeats of Bangladesh; (g) Cholesterol reduced butter

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07/05/2014

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