Chittagong Veterinary & Animal Sciences University
Department of Dairy & Poultry Science
MS in Dairy Science
July - Dec. 2017
Sub: Research Methodology (Theory)
Total Marks : 40
Time : 02 hrs

Answer any 4 (four) questions. Figures in the right margin indicate full marks. Fragmented answers are discouraged.

1. (a) State the main objectives to study Research Methodology and different approaches to biological researches. 5·0
(b) Write a note on "Research and Scientific Method". 5·0

2. (a) Sketch the sequential steps in research process with description of FF. 5·0
(b) Write a note on "planning of research". 5·0

3 (a) State the concept of "Research problem". What are the techniques of defining a problem? 5·0
(b) What is "Research Design"? What are the common features and ideal characteristics of a good research design? Explain. 5·0

4. (a) What is a sample design? State various techniques of drawing sample for categorical researches. 5·0
(b) What is datum? Write a note on processing and analysis of data. 5·0

5. (a) What do you mean by "Hypothesis". State the importance of drawing hypothesis with relevance. 5·0
(b) Write a note on "Hypothesis testing". 5·0

Chittagong Veterinary and Animal Sciences University

Dept. of Dairy and Poultry Science

Final Examination July-December Semester/2017

MS in Dairy Science

Course: Advanced Dairy Cattle Production

Course Code: DCP-602, Total Marks: 40

Answer any four questions from the following of which question no. 1 is compulsory.

1. Mr. Rafiqul Islam an established dairy entrepreneur of Chittagong aiming to convert his farm into organic one since organic milk price is more than double compare to non-organic milk but he doesn't have enough knowledge and experience regarding this matter. Last Sunday Mr. Rafiqul came to you for getting advice regarding following issues 2.5×4=10
   a) Can he use the present dairy herd for organic dairy farming? If yes, what will be the procedure and if no what are the reasons behind?
   b) How will he convert the present fodder field into organic one?
   c) How will he ensure the healthcare issue of the herd?
   d) How will he feed the calves?
2. Discuss cattle breeding policy with criticisms (if any) of 1982, 2000 and 2007 in Bangladesh. 10
3. a) Why do we need to manipulate the rumen of dairy cattle? 05
   b) How will you manipulate the rumen microflora with organic acids supplementation? 05
4. a) List the methods of payment of raw milk in the world & Bangladesh? 03
   b) Which method of payment of raw milk maintains the interest of all stakeholders and how? 07
5. a) What are the points will you consider during feeding milk to calf? 05
   b) Illustrate different methods of colostrum feeding to calf. 05

M.S. in Dairy Science Semester Final Examination

July to December Semester 2017

Sub: Dairy Cattle Feeds and Fodder Production and Preservation

Course Code: DFP-602

Full Marks: 40; Time: 2 Hours

Answer **any four** questions from the following. Figure in the right margin indicate full marks.

1. a) Describe about the processing of feeds and high yielding fodder. 5
   b) Write down the storage system of high yielding fodder. 5

2. a) Describe about the supply system of green grass througtout the year. 5
   b) Write down the production procedure of hydroponic fodder production. 5

3. a) Mention the processing method for improving the nutritive value of roughages. 5
   b) Describe about the agricultural by product processing method. 5

4. a) Describe about the cultivation procedure of perennial fodder. 5
   b) Write down the production procedure of seasonal fodder. 5

5. a) Describe about the poisonus plants for animal. 5
   b) Mention about the antinutritional factors in dairy animal feed stuffs. 5

MSc Poultry science final examination 2017
Semester: July-December

Course: Poultry Behavior and Welfare

Course code: PBW-602
(Answer all of the questions. All questions are of equal marks)

Total marks: 40

Time: 2 hours

Questions:

1. Describe behavior of commercial as well as rural chicken.
2. Write in detail of the general behavior of chicken.
3. Write notes on- i) Cannibalism ii) broodiness iii) Perching and iv) Semi scavenging.
4. Describe breeding in cage and floor of the breeding flock.

MSc Poultry science final examination 2017
Semester: July-December
Course: Parent Stock & Commercial Layer Management
Course code: PCL-602
(Answer all of the questions. All questions are of equal marks)
Total marks: 40

Time: 2 hours

Questions:

1. How would you maintain cold stress in winter.
2. How would you maintain heat stress in summer.
3. Give feeding and lighting management in parent flock.
4. Write in detail of bio security in a breeder farm.

Chittagong Veterinary and Animal Sciences University
Department of Dairy and Poultry Science
MS in Poultry Science Final Examination 2017
Semester: July-December, 2017
Course Title: Hatchery Operation and Management (HMT-602)
Total Marks-40; Time: 2 Hours

Answer any five of the following questions. Figures in the right margin indicate full marks.

1.	i) Discuss the prospects and problems of poultry hatchery in Bangladesh.	4
	ii) Draw a layout of modern commercial hatchery building.	4
2.	i) What is incubation?	1
	ii) Classify incubators with examples.	3
	iii) Differentiate between still air and forced draft incubator.	4
3.	i) Define 'fertility' and 'hatchability' of eggs.	2
	ii) Explain the factors affecting fertility and hatchability of chicken eggs.	6
4.	i) Suppose you have a Petersime incubator with 18800 eggs hatching capacity and 67200 eggs setting capacity. What would be your planning regarding egg setting to supply day old chick (DOC) twice weekly to the farmers?	4
	ii) Summarize the collection, selection and storage of hatching eggs in a hatchery.	4
5.	i) Name the critical period of embryonic development of chick with the explanation.	3
	ii) Explain the pre-oviposital embryonic development of chicks.	3
	iii) Identify the possible causes of sticky and mushy chicks in a hatchery?	2
6	i) Write the criteria of quality chicks.	2
	ii) Prepare the tona and pasgar scoring of day old chick (DOC) with example.	6

Chittagong Veterinary and Animal Sciences University
Department of Dairy and Poultry Science
MS in Poultry Science Final Examination 2017
Semester: July-December, 2017
Course Title: Parent Stock and Commercial Broiler Management (PCB-602)
Total Marks-40; Time: 2 Hours

Answer any five of the following questions. Figures in the right margin indicate full marks.

1.	Define the following terminology: GPS, Parent Stock, Hybrid, Finger Index, Straight Run, SSF, Spiking, Debeaking.	8
2.	i) Explain the management program starting well before the chicks arrive on brooder shed.	4
	ii) Name the alternative feeding systems used in Cobb broiler breeder.	1
	iii) Explain Skip-A-Day feeding and 5/2 feeding with examples.	3
3.	i) What is uniformity?	1
	ii) How will you measure uniformity in a growing Ross breeder flock?	3
	iii) State the importance of maintenance phase?	1
	iv) Discuss about fleshing score with its importance.	3
4.	i) What are the key rules determining readiness for light stimulation to Cobb 500.	2
	ii) Describe the lighting program for Cobb 500 breeder flock going from dark-out rearing to dark-out production housing.	6
5.	i) Name the breed used for the broiler strain development.	1
	ii) Discuss the factors considered for preparing a successful broiler line.	4
	iii) Explain the sexing procedure of a day old broiler chick with diagram.	3
6	i) What is Biosecurity?	1
	ii) Prepare a standard vaccination schedule for a broiler parent stock.	3
	ii) Describe the broiler performance indices.	4

Department of Dairy & Poultry Sciences

MS in Dairy Science

July - Dec. '17

Sub: Microbiology of Milk and Milk Products.

Total marks —— 40

Time —— 02 hrs.

Answer any 4 questions. Fragmented answers are strongly discouraged. Figures in the right margin indicate full marks.

1(a) Write a note on "Recent development in the field of dairy microbiology" 5·0

(b) Write at least 10 (ten) organisms each for beneficial and spoilage organisms relevant to dairy industry with their roles and actions. 5·0

2.(a) State the common lactic acid bacteia used in dairy industry with their modes of action. 5·0

(b) Write a note on "Comperative genomics of bacteriophage infecting lactic acid bacteia". 5·0

3.(a) State the concept of "Starter Culture". State different techniques & procedures for developing a single strain Culture. 5·0

(b) Write a note on "Judging a culture". 5·0

4.(a) State the gene action and expression of different types of lactic acid bacteia. 5·0

(b) Write a note on "Recombination in bacteia" 5·0

5. Write short note on any 4 (four) of the followings: 4×2·5 = 10·0

(a) Common microbial defects in butter with their causal microorganisms;

(b) Yeasts in dairy industry;

(c) Psychrophilic bacteia and storage of Market Milk;

(d) Genetic metabolisms of lactose and other sugars;

(e) Lactic and flavor cultures for the manufacture of fermented milk products;

(f) Culture media used in Dairy Microbiology; and

(g) Coliform bacteia and public health hazards.

X

Chittagong Veterinary and Animal Sciences University
Department of Dairy and Poultry Science
MS in Dairy Science
M S July – December Semester Final Examination – 2017
Course title: Dairy Farm Planning and Management (Theory)
Course Code: FPM – 602

Time: 2 hours
Marks: 40
4X10=40

Answer any four (4) of the following questions

1	a)	Enlist the factors that are to be considered for establishing a commercial dairy farm.	5
	b)	"Proper site selection is necessary to establish a dairy farm" – Justify.	5
2	a)	Prepare a plan and prospect for a commercial dairy herd of 120 cows.	5
	b)	Design a layout of housing for a 500 cows dairy herd.	5
3	a)	Prepare a plan of dairy farm to supply 200 litres milk daily to a sweetmeat shop.	5
	b)	Design a details layout of stanchion barn of a 50 cows dairy herd.	5
4	a)	Make a plan to supply year-round fodder to a 60 cows dairy herd.	5
	b)	Organize a schedule to supply year – round concentrate feed to a 120 cows dairy herd.	5
5	a)	Criticize the operational systems of a commercial herd.	5
	b)	Develop a plan and schedule to manage milk from milking to delivery.	5

Chittagong Veterinary and Animal Sciences University
Department of Dairy and Poultry Science
MS in Dairy Science
M S July – December Semester Final Examination – 2017
Course title: Market Milk Production and Processing (Theory)
Course Code: MPP – 602

Time: 2 hours
Marks: 40
Answer any four (4) of the following questions
4X10=40

1	a)	Enlist the factors that are to be considered during transportation of milk.	5
	b)	Describe the factors affecting the composition and yield of milk.	5
2	a)	Compare the graduai changes of composition of colostrums to milk.	5
	b)	Enlist the measures that should be taken in consideration for production of clean and safe milk.	5
3	a)	Describe the preparation procedure of flavored milk.	5
	b)	Contrast the methods of packaging and storage of market milk.	5
4	a)	Enlist the critical points of HTST methods of pasteurization of milk.	5
	b)	State the precautions that should be kept in consideration during HTST pasteurization.	5
5	a)	Classify sanitizers. Make a list of sanitizers used in milk pasteurization plant.	5
	b)	Describe the mechanism of cleaning and sanitization in the process of Cleaning-In-Place (CIP).	5

Chittagong Veterinary and Animal Sciences University
MS in Poultry Science Final Examination
July to December Semester- 2017
Subject: Poultry Feeds and Feeding -Theory
Course Code : PFF-602
Total Marks: 40; Time: 02 hours

Answer any five of the following questions including 4; Figures in the right margin indicate the full marks

1. a) Define human grade, supplement, APP, CP, calorie and energy? 2

   b). Discuss the different types of energy for monogastric animal 4

   c) State the problems of using animal protein in poultry diets 2

2. a) Discuss qualitative and quantitative feed restriction systems in the parent breeder stock 3

   b). Narrate the factors that influence feed consumption and protein requirements in laying hen 5

3. a) What is vitamins, pro-vitamins and critical vitamins ? 1.5

   b) Describe diseases caused by vitamins deficiency with their symptoms and remedies in poultry 6.5

4. a) Define stress? List the different stresses that affect the production of poultry 2

   b). Write down the symptoms which may expose by poultry during stress condition 3.5

   c). Discuss the feeding management systems of poultry at heat stress condition 2.5

5. a) What is macro and micro minerals? Show the chart of important mineral requirements for the chicken diet 3

   b) Give the dietary specifications for optimizing shell quality of layer breeder flock 2

   c) State the interrelationships between trace minerals 3

6. **Give a short note -any five of the following: (1.6 × 5=8)** 8

   a) C: P ratio

   b) Non-conventional feeds

   c) Anti-nutritive factors

   d) Quality control in feed manufacturing

   e) Feed additives

   f) BV

   g) Phase feeding

   h) Nutrition and genetics

Chittagong Veterinary and Animal Sciences University
MS in Poultry Science Final Examination
Semester: July to December- 2017
Subject: Biochemistry of Egg -Theory
Course code: BCE-602; Total Marks: 40
Time: 02 hours

Answer any five of the following questions with 4; Figures in the right margin indicate the full marks

1. a) What is egg yolk? Show the detailed microscopic composition of yolk 4

   b) 'Egg is an ideal or complete food products'---justify this 4

2. State the nutritional and microbiological impact on the quality of egg 8

3. a) What is shell matrix? Give the microscopic composition, function and uses of egg shell 6

   b) List the organisms that cause pigments in egg 2

4. a) **'Egg cholesterol is good for health or not'** – explain this 3

   b) List the types of proteins present in the egg yolk & egg white 4

   c) Write the typical constituents of egg shell membranes 1

5. a) Write the anti-nutritional factors present in the egg, and the composition of fresh and dry yolk 3

   b) State the indigenous method of preserving egg 5

6. **Write annotation-- -any five of the following: (1.6 × 5=8)** 8

   a) Internal quality factors of egg

   b) Egg grading or standards

   c) Egg fallacy

   d) Functional role of egg in the food products

   e) Sources of egg and their characteristics

   f) Cracks of eggs

   g) Chalazae

   h) **'Egg' cellent facts**