MSc Poultry science final examination 2020D
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. Describe management of broiler breeder in winter.
2. Describe the steps of remedy of heat stress on commercial broiler.
3. Write in detail of lighting management in parent flock.
4. Write in detail of the biosecurity in commercial layer farm.

MSc Poultry science final examination 2021
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. Give description on general behavior of commercial broiler.
2. How would you ensure seasonal welfare of the chicks and grower chicken ?
3. Write notes on- i) Cannibalism ii) Social hierarchy iii) Monitor housing and iv) Semi scavenging
4. What can be the stress factors on laying hens ? Write in detail of the behavioral changes of chicken in stress conditions.

Chattogram Veterinary and Animal Sciences University
MS in Poultry Science final exam-2020-Theory
Semester: July- December-2020
Subject: Biochemistry of Egg
Course Code: BCE-602; Total Marks: 40; Time: 2 hours

Answer any five of the following questions **including question 1**; Figures in the right margin indicate the full marks

1. a) Define egg, egg cholesterol, HDL and LDL 2

   b) Egg cholesterol is good for health or not –justify this 2

   c) Discuss the food value of egg 4

2. a) Discuss the factors that affect egg quality 6

   b) Mention the nutrient amount found in animal products that can fulfil the protein need of human being each day 2

3. a) Discuss the microscopic composition of egg shell 4

   b) State the mechanism of egg shell formation 4

4. What is preservation of egg? State briefly the different methods of preserving poultry eggs 8

5. Mention the multiple uses of egg including the proportion of egg utilization globally 8

6. a) What is egg protein? State the composition of egg protein with its characteristics 4

   b) Mention the functional properties attributed to egg proteins in food systems 4

7. Draw and label the anatomical structure of egg with description 8

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

   a) Balut

   b) Yolk composition

   c) Misconception of eggs

   d) Egg processing

   e) Egg marketing

   f) Abnormalities of egg

   g) Microbiological impact on egg deterioration

Chatttogram Veterinary and Animal Sciences University
MS in Poultry Science final Exam-2020-Theory
Semester-July-December-2020
Subject: Poultry Feeds and Feeding
Course Code: PFF-602: Total marks: 40: Time: 2 hours

Answer any five of the following questions **including question 1**: Figures in the right margin indicate the full marks

1.a) Define ration,, diet, feed, feed grade, medicated feed, balanced diet, unconventional and conventional feeds 4

b) State the problems for using unconventional feeds for poultry 3

c) Mention the unidentified growth factor for poultry 1.

2. a) What is feed supplement and additives? Discuss different sort of additives uses in poultry 4
b) Discuss the pre-requisites for the formulating of poultry diet 4

3. a) What is phytic acid ? 2
b) Discuss the anti-nutritive factors present in poultry feeds and the process of elimination 6

4 .a) What is biological value? State the physical, biological and chemical processes of evaluating poultry feedstuffs 5
b) Distinguish between FCR and FCE 3

5. a) What is vitamins and pro-vitamins? State the nutritional disorders caused by vitamins and mineral deficiency in poultry 6
b) Distinguish between fat soluble and water soluble vitamins 2

6 a) What is the essential amino acids? Enlist the essential amino acids for poultry 3

b) State the factors that affect the protein requirement of poultry 5

7. a) What is cafeteria feeding? Discuss the factors that affect the choice feeding system of poultry. 4

b) Discuss the inter-relationship of Ca, P and vitamin-D 4

8. Write short note : Any four of the following $(4 \times 2) =$ 8

a) EDTA b) Grit mixture c) Nature and nurture d) Implant e) Premix f) Feeding standard
g) Calorie protein ratio h) Voluntary feed intake i) Phase feeding

Chittagong Veterinary and Animal Sciences University
Department of Dairy and Poultry Science
MS in Poultry Science
July-December Semester, Final examination-2020
Sub: Parent stock and commercial broiler management
Sub code: PCB-602
Total marks: 40
Total time: 2hours

Answer any of the five questions (5X8= 40). The mark for each question is indicated in the right-hand side).

1.	**a)**	What do you mean by parent and grandparent stock?	02
	b)	Briefly describe the important selection criteria for broiler breeding stock	06
2.	**a)**	What do you mean by flock uniformity? How will you calculate the flock uniformity?	03
	b)	State the factors influencing the flock uniformity in a parent stock. Mention the ways to maintain flock uniformity in parent stock.	05
3.		Briefly describe the management practices from day-old chick to laying stage of grandparent stock	08
4.	**a)**	State the importance of body weight management of breeding male.	
	b)	Briefly describe the body weight management practices of male in breeding stock	
5.	**a)**	Why feed restriction is necessary for broiler breeder parent stock?	04
	b)	Briefly describe the feed restriction methods in broiler breeder.	04
6.	**a)**	State the nutrient specification for Cobb and Ross parent stock.	03
	b)	Briefly describe the factors influencing the poor reproductive performance of broiler parent stock.	05

Chattogram Veterinary and Animal Sciences University
Department of Dairy and Poultry Science
MS in Poultry Science
July-December Semester
Final examination-2020
Sub: Hatchery operation and management
Sub code: HMT-602
Total marks: 40
Total time: 2 hours

Answer any of the five questions (5X8= 40). The mark for each question is indicated in the right-hand side).

1.		What are the important points to be considered during planning of a hatchery establishment?	**8**
2.	**a)**	Briefly describe the egg formation process in the oviduct of poultry.	**5**
	b)	How light influences the egg formation process in poultry?	**3**
3.	**a)**	State the source, selection, and care of hatching egg.	**4**
	b)	Explain the effect of storage on hatchability of egg.	**4**
4.	**a)**	Define incubation. Briefly mention the incubation period for different poultry species.	**5**
	b)	Briefly describe the factors that affect the incubation time.	**3**
5.	**a)**	Briefly describe the methods for chick quality evaluation?	**4**
	b)	Describe the factors that influence the quality of chick.	**4**
6.	**a)**	Define fertility and hatchability.	**2**
	b)	Briefly describe the different factors that influence the fertility of eggs.	**6**
7.		Describe the biosecurity procedures of a hatchery.	**8**

MS in Dairy Science Semester Final Examination
July to December Semester/2020
Sub: Dairy Cattle Feeds and Fodder production and preservation
Course code: DFP-602
Marks: 40 Time: 2 hours

Answer any **four** questions from the following where **Q no 1** is compulsory:

1.	a.	Indicate the possible strategies to increase dairy feed and fodder production in developing countries like Bangladesh.	4.0
	b.	Discuss briefly about five grain processing methods and indicate the chemical and physical changes occurred during processing of grain.	6.0
2.	a.	Indicate the importance/ purpose of processing dairy feed and fodder.	4.0
	b.	Mention briefly about the morphology, fertilizer dose, time and method of sowing, management and utilization, yield and nutritive value of Napier, Jumboo and Guinea fodder.	6.0
3.	a.	Discuss about the anti-nutritional factors in dairy animal feed stuffs.	5.0
	b.	How will you evaluate the feed? Briefly discuss two feed evaluation methods.	5.0
4.		Concisely discuss the roughage and concentrate requirement, and strategies of supply green grasses throughout the year to meet up the nutritional requirements of 100 cow dairy herd.	10.0
5.	Write short notes on (Any Two) a. Maize and Soybean fodder cultivation. b. Poisonous plants for animals. c. Silage Making.		5.0x2 =10

Chittagong Veterinary and Animal Sciences University

Dept. of Dairy and Poultry Science

MS in Dairy Science

Final Examination, July - December Semester/2020

Course: Advanced Dairy Cattle Production

Course Code: DCP-602; Total Marks: 40

Time: 2 Hours

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

1. a) How will you identify the quality of management of a dairy farm through analyzing records? 05
   b) Explain the feeding strategy for "Transitional Cow" aiming to control the clinical and sub-clinical hypocalcaemia. 05

2. How the high humidity and solar radiation affect the temperate type cattle and their crossbreds in Bangladesh? 10

3. Show the biological framework for achieving optimum herd fertility in a commercial dairy herd. 10

4. a) Mention the current constrains of organic dairy farming in Bangladesh. 05

   b) List the USDA regulations for marketing organic dairy products. 05

5. a) List the methods of payment of milk with advantages and disadvantages practicing throughout the world. 05

   b) Which method of payment of milk is more accepted to the farmers, processors and consumers & why? 05

Chittagong Veterinary and Animal Sciences University

Dept. of Dairy and Poultry Science

Final Examination July-December Semester/2020

MS in Dairy Science

Course: Dairy Farm Planning and Management

Course Code: FPM-602, Total Marks: 40, Time: 2 hours

You are a recent graduate of CVASU has been joined in "Vision Agricultural Consultancy Farm" as a dairy consultant. Last Thursday an entrepreneur has come to you and given a big task for preparation a dairy project of 250 dairy cows aiming to get sufficient amount of loan from City Bank. After calculation it was seen that the cost of land, land development, farm construction, equipments & machineries, dairy cow, preliminary farm operation cost, inflation & contingency, pre-production expenditure and interest during grace period were 47500000/-, 1500000/-, 32000000/-, 9500000/-, 37500000/-, 2380000/-, 6519000/-, 300000/- and 3977226/-, respectively. Among the above mentioned expenditures owner is expecting loan for land, sheds and equipments & machineries. The following information is provided by the entrepreneur:

Name of entrepreneur: Md. Hafigur Rahman; Name of the project: Fresh Dairy Complex; Own Land: 12 acres for establishing infrastructure of the farm, Location of the farm land: J.L. No. 88, B.S. No. 246, Hathazari, Chattogram. Fodder land will be purchased from private sources, Duration of loan: 10 years; Grace period: 6 months; Interest rate/year: 09%; Mode of payment of loan: Equal monthly Installment (EMI).

MONTHS	EMI	INTEREST	PRINCIPAL REPAYMENT	OST PRINCIPAL
0				83477226
1	1,091,952	626079	465873	83011353
2	1,091,952	622585	469367	82541987
3	1,091,952	619065	472887	82069100
4	1,091,952	615518	476434	81592666
5	1,091,952	611945	480007	81112659
6	1,091,952	608345	483607	80629052
7	1,091,952	604718	487234	80141818
8	1,091,952	601064	490888	79650930
9	1,091,952	597382	494570	79156360
10	1,091,952	593673	498279	78658081
11	1,091,952	589936	502016	78156064
12	1,091,952	586170	505781	77650283
13	1,091,952	582377	509575	77140708
14	1,091,952	578555	513397	76627312
15	1,091,952	574705	517247	76110065

16	1,091,952	570825	521126	75588938
17	1,091,952	566917	525035	75063903
18	1,091,952	562979	528973	74534931
19	1,091,952	559012	532940	74001991
20	1,091,952	555015	536937	73465054
21	1,091,952	550988	540964	72924090
22	1,091,952	546931	545021	72379069
23	1,091,952	542843	549109	71829960
24	1,091,952	538725	553227	71276733
25	1,091,952	534575	557376	70719356
26	1,091,952	530395	561557	70157800
27	1,091,952	526183	565768	69592031
28	1,091,952	521940	570012	69022020
29	1,091,952	517665	574287	68447733
30	1,091,952	513358	578594	67869139
31	1,091,952	509019	582933	67286206
32	1,091,952	504647	587305	66698900
33	1,091,952	500242	591710	66107190
34	1,091,952	495804	596148	65511042
35	1,091,952	491333	600619	64910423
36	1,091,952	486828	605124	64305299
37	1,091,952	482290	609662	63695637
38	1,091,952	477717	614235	63081403
39	1,091,952	473111	618841	62462561
40	1,091,952	468469	623483	61839079
41	1,091,952	463793	628159	61210920
42	1,091,952	459082	632870	60578050
43	1,091,952	454335	637617	59940433
44	1,091,952	449553	642399	59298035
45	1,091,952	444735	647217	58650818
46	1,091,952	439881	652071	57998747
47	1,091,952	434991	656961	57341786
48	1,091,952	430063	661888	56679897
49	1,091,952	425099	666853	56013045
50	1,091,952	420098	671854	55341191
51	1,091,952	415059	676893	54664298
52	1,091,952	409982	681970	53982328
53	1,091,952	404867	687084	53295244
54	1,091,952	399714	692238	52603006
55	1,091,952	394523	697429	51905577
56	1,091,952	389292	702660	51202917
57	1,091,952	384022	707930	50494987
58	1,091,952	378712	713239	49781747
59	1,091,952	373363	718589	49063158
60	1,091,952	367974	723978	48339180
61	1,091,952	362544	729408	47609772
62	1,091,952	357073	734879	46874893
63	1,091,952	351562	740390	46134503

64	1,091,952	346009	745943	45388560
65	1,091,952	340414	751538	44637022
66	1,091,952	334778	757174	43879848
67	1,091,952	329099	762853	43116995
68	1,091,952	323377	768574	42348421
69	1,091,952	317613	774339	41574082
70	1,091,952	311806	780146	40793936
71	1,091,952	305955	785997	40007938
72	1,091,952	300060	791892	39216046
73	1,091,952	294120	797832	38418215
74	1,091,952	288137	803815	37614399
75	1,091,952	282108	809844	36804555
76	1,091,952	276034	815918	35988638
77	1,091,952	269915	822037	35166601
78	1,091,952	263750	828202	34338398
79	1,091,952	257538	834414	33503984
80	1,091,952	251280	840672	32663312
81	1,091,952	244975	846977	31816335
82	1,091,952	238623	853329	30963006
83	1,091,952	232223	859729	30103277
84	1,091,952	225775	866177	29237099
85	1,091,952	219278	872674	28364426
86	1,091,952	212733	879219	27485207
87	1,091,952	206139	885813	26599394
88	1,091,952	199495	892456	25706938
89	1,091,952	192802	899150	24807788
90	1,091,952	186058	905893	23901894
91	1,091,952	179264	912688	22989207
92	1,091,952	172419	919533	22069674
93	1,091,952	165523	926429	21143244
94	1,091,952	158574	933378	20209867
95	1,091,952	151574	940378	19269489
96	1,091,952	144521	947431	18322058
97	1,091,952	137415	954536	17367522
98	1,091,952	130256	961695	16405826
99	1,091,952	123044	968908	15436918
100	1,091,952	115777	976175	14460743
101	1,091,952	108456	983496	13477247
102	1,091,952	101079	990873	12486374
103	1,091,952	93648	998304	11488070
104	1,091,952	86161	1005791	10482279
105	1,091,952	78617	1013335	9468944
106	1,091,952	71017	1020935	8448009
107	1,091,952	63360	1028592	7419418
108	1,091,952	55646	1036306	6383111
109	1,091,952	47873	1044079	5339033
110	1,091,952	40043	1051909	4287124
111	1,091,952	32153	1059798	3227325

112	1,091,952	24205	1067747	2159578
113	1,091,952	16197	1075755	1083823
114	1,091,952	8129	1083823	0

Based on above mentioned scenario and information, answer any five questions including question no. 5 from the following. Figures in the right margin indicate full marks. .

1. What are the components of the dairy system would you like to include in the project? 06
2. Show the ratio of equity and loan. 06
3. Forecast the annual income of the project during loan period. 06
4. Show in detail the loan re-payment plan of the project. 06
5. Calculate the recurring expenditures during the loan period. 16
6. Show the summery of the project. 06

Chittagong Veterinary and Animal Sciences University

M. S. in Dairy Science July-December Semester Final Examination-2020

Course Title: Microbiology of Milk & Milk Products (Theory), Course Code: MMP-602

Full Marks: 40, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer any **FOUR** questions of which question Number **1** is compulsory)

1.	a)	What is Dairy Microbiology? Write down the public health significance of Dairy Microbiology.	**3.0**
	b)	Briefly describe molecular methods for microbial identification in dairy products.	**6.0**
	c)	Illustrate the significance of lactic acid bacteria?	**1.0**
2.	a)	What do you mean by milk-borne disease? Enlist the common milk-borne disease.	**3.0**
	b)	State one most important organism for milk- borne disease with their sign, symptoms, prevention and control.	**5.0**
	c)	How to prevent milk-borne infectious diseases?	**2.0**
3.	a)	Write do you mean by conjugation, transformation and transduction ?	**2.0**
	b)	Briefly describe the gene expression of different types of lactic acid bacteria.	**3.0**
	c)	Illustrate the mechanisms of antibiotic resistance in food chain.	**3.0**
	d)	Enumerate the risk of fermented foods produced by lactic acid bacteria.	**2.0**
4.	a)	Define dairy starter culture with classification	**2.0**
	b)	Give a flow chart for the pure culture production.	**3.0**
	c)	Enlist the common culture defects.	**2.0**
	d)	What are the bacterial cultures used in fermented milk product manufacture.	**3.0**

5. Write short notes (**any 4**) : **2.5 x 5=10**

a). HACCP b). Genetics of lactic acid bacteria c). Common microbial defects & their control of cheese d). Culture media used in dairy microbiology e) LAB plasmids g). Microbiological standards of Grade-A milk and milk products.

Chattogram Veterinary and Animal Sciences University
Department of Dairy and Poultry Science
MS in Dairy Science
July-December Semester/2020
Final Exam-2020
Sub: Research Methodology
Course Code: RMD-602
Total marks: 40
Total time: 2 hours

Answer any of the four questions (4X10= 40). The mark for each question is indicated in the right-hand side).

1.	a)	Define the term "research problem, research design and research question".	4
	b)	"A research scholar has to work as a judge and derive the truth and not as a pleader who is only eager to prove his case in favour of his plaintiff." Discuss the statement pointing out the objectives of research.	6
2.	a)	What is hypothesis? Differentiate between alternate and null hypothesis with example from the relevant field.	5
	b)	What do you mean by type 1 and Type II error? Explain them with relevant example from your research field.	5
3.	a)	Explain the meaning and significance of research design.	4
	b)	Expalin and illustrate experiemental design with example.	6
4.	a)	Explain why questionnaires are popular tools for Data Collection in Research.	4
	b)	Discuss qualities of a good questionnaire.	3
	c)	Explain the procedure of designing a good questionnaire.	3
5.	a)	What do you mean by variable? Briefly describe the different types of variables?	4
	b)	Suppose you are going to investigate the effect of a protein supplement in a lactating cow. [illegible] What types of variables should be collected for this purpose? And why?	6
6.	a)	Define the term sample, population, target population and smapling.	2
	b)	What is a sampling unit? How is it different from the population element?	4
	c)	Under what circumstances you recommend: a. A probability sample b. A non-probability sample. c. A cluster sample	4

Chittagong Veterinary and Animal Sciences University

M. S. in Dairy Science July-December Semester Final Examination-2020

Course Title: Market Milk Production and Processing (Theory), Course Code: MPP-602

Full Marks: 40, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer any **FOUR** questions of which question number**1** is compulsory)

1.	a)	What is Market Milk? How can individual liquid milk processing plants evaluate the quality of Market Milk?	**3**
	b)	Make a plan for the establishment of milk processing plant with layout.	**7**
2.	a)	UHT vs Pasteurized milk : Which is a better choice? Briefly describe the HTST milk pasteurization.	**6**
	b)	State the effect of homogenization on milk and milk products. Show it diagrammatically.	**4**
3.	a)	Write down the analytic detail chemical composition of milk.	**3**
	b)	What do you mean by standardization? If a dairy has 160 kg of 40% cream and wishes to standardize it to 32% cream, how much skim milk must be added?	**4**
	c)	Diagrammatically explain the automatic standardization process.	**3**
4.	a)	Write do you mean by milk prevention? Enlist the common milk prevention techniques'.	**3**
	b)	State one most important milk prevention technique(s) for rural area of Bangladesh. Briefly described with sketch.	**7**
5.	a)	Write do you mean by flavored milk, reconstituted milk and toned milk?	**3**
	b)	Illustrate the manufacturing process of flavored milk.	**4**
	c)	Briefly describe the advantages and disadvantages of sterilized milk.	**3**
6.	Write short notes (**any 4**) :		**2.5 x 4=10**

a). History of market milk b). Sanitization of dairy equipments and plants c). Judging and grading of milk d). Milk pricing system e) Milk chilling.