

Chittagong Veterinary and Animal Sciences University

Dept. of Dairy and Poultry Science

Final Examination July-December Semester/2018

MS in Dairy Science

Course: Advanced Dairy Cattle Production

Course Code: DCP-602, Total Marks: 40, Time: 2 hour

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

1. a) Can you identify and illustrate the mismanagement of a dairy farm through analyzing the livestock and breeding register kept in that farm? 06
b) Mention the methods of separation of calf after birth with comparative advantages and disadvantages. 04
2. a) Why is drying off considered as an important stage of life in case of HYV cows? 02
b) Discuss the salient features of existing cattle breeding policy of Bangladesh. 05
c) What are the factors should you consider for weaning a calf? 03
3. a) Mention the current constrains of organic dairy farming in Bangladesh. 03
b) Discuss the pre-requisites of organic dairy farming. 03
c) Design a breeding programme in your dairy farm considering the cattle breeding policy and climatic condition of Bangladesh. 04
4. a) Discuss the co-operative milk marketing scenario of Bangladesh. 05
b) Illustrate the different methods of payment for raw milk in the world. 05
5. a) Mention the constrains of commercial dairy farming in Bangladesh under existing climatic and feeding acondition and its possible remedies. 05
b) How will you improve the milk flavor of your dairy herd? 05

MSc Poultry science final examination 2018
Semester: July-December

Course: Poultry Behavior and Welfare

Course code: BW-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 as well as Rural chicken.
2. Write in detail of the behavioral changes of chicken in stress conditions.
3. Write notes on- i) Dust bathing ii) Dominancy iii) Nesting and iv) Semi scavenging.
4. How would you ensure welfare in winter as well as in summer of the broiler chicken ?

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Chittagong Veterinary and Animal Sciences University
Department of Dairy and Poultry Science
MS in Dairy Science
July-December Semester
Final examination-2018
Sub: Research Methodology
Course Code: RMD-602
Total marks: 40
Total time: 2hours

Answer any of the five questions (5X8= 40)

1. a) What is research?
b) Briefly describe the different steps involved in research process.
2. a) What is research problem? What are the main criteria of a good research problem?
b) Formulate a research problem from your relevant field by considering steps involve in preparing the research problem.
3. a) What do you mean by primary data? What are the advantages and disadvantages of primary data?
b) What are the various methods of collecting primary data?
4. a) Briefly explain independent, dependent and extraneous variables in a research design with example.
b) Briefly describe various types of hypothesis in research design with example.
5. a) Distinguish between research methods & research methodology
b) Under what circumstances would you recommend?
(a) A probability sample? (b) A non-probability sample? (c) A stratified sample?
(d) A cluster sample? (e) A multi-stage sampling
6. a) Enlist the different types of study design with example.
7. A new pharmaceutical company produces two different antibiotics to treat the mastitis. You have been asked to evaluate the efficacy of these newly invented drugs. How will you do you it?
8. Briefly describe the chief features of a good research report. Give suitable examples.

Chittagong Veterinary and Animal Sciences University
Department of Dairy and Poultry Science
MS in Poultry Science
July-December Semester
Final examination-2018
Sub: Hatchery operation and management
Course code: HMT-602
Total marks: 40
Total time: 2 hours

Answer any of the five questions (5X8= 40)

1. What are the important points to be considered during planning of a hatchery establishment?
2. a) How will you identify the fertile eggs from table egg?
b) Briefly describe the different sources of fertile eggs.
c) Describe the selection and storage process of fertile egg.
3. a) Define incubation. Briefly mention the incubation period for different poultry species.
b) What are main requirements of incubation?
4. Briefly describe the factors that affect the baby chick quality.
5. Write any of the two short notes (2x4= 8)
 - a) Production indices
 - b) Causes of hatching failure
 - c) Nutrition infertility
6. a) How will you evaluate the quality of day old chick?
b) Describe the necessary steps from hatching to transportation of day-old chicks.
7. a) Define fertility and hatchability.
b) Briefly describe the different factors that influence the hatchability.

Chittagong Veterinary and Animal Sciences University
Department of Dairy and Poultry Science
MS in Poultry Science
July-December Semester, Final examination-2018
Sub: Parent stock and commercial broiler management
Sub code: PCB-602
Total marks: 40
Total time: 2 hours

Answer any of the five questions (5X8= 40)

1. Briefly describe the important selection criteria for broiler breeding stock?
2. a) What do you mean by parent and grandparent stock?
b) Briefly describe the management practices from day-old chick to laying stage of grandparent stock.
3. a) What do you mean by flock uniformity? How will you calculate the flock uniformity?
b) Why uniformity is necessary in a poultry flock? How will you maintain flock uniformity in parent stock?
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) What is thermoregulation? Briefly describe the thermoregulation mechanism in poultry.
b) How will you minimize the heat stress in parent stock?
6. a) Briefly describe the factors influencing the profitability of parent stock and commercial broiler production in Bangladesh.
b) What is your recommendation to improve the profitability of poultry industry?

7. a) What do you mean by biosecurity?
b) Prepare a biosecurity plan for a broiler parent stock farm.
8. A farmer who is going to establish a commercial broiler farm with 1000 bird per batch. He has no prior knowledge about the management practices of commercial broiler farm. Therefore, he asked your help and as a consultant what support and advices will you provide him for successful running of the farm.

MSc Poultry science final examination 2018
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 breeder or commercial layer farm of in winter.
2. Name some stress killer. How would you maintain heat stress in summer?
3. Write the effect of light on ovulation. Write in detail of lighting management in parent flock.
4. Give the vaccination schedule in a breeder farm and a commercial layer farm.

Chittagong Veterinary and Animal Sciences University
MS in Poultry Science Final Examination
July to December Semester- 2018
Subject: **Biochemistry of Egg (BCE-602)**
Total Marks: 40. Time: 02 hours

Answer any five of the following questions with 1, Figures in the right margin indicate the full marks

1. a) Egg cholesterol is not detrimental for health—justify this 2
b) Mention the nutritional value of poultry egg 4
c) Write the strategies to reduce the risks arising from egg cholesterol 2
2. a) Mention the factors that affect egg quality 3
b) Draw and label the different parts of egg with description 5
3. a) Why egg preservation is necessary? State the techniques to preserve poultry eggs for home consumption 3
b). Mention the proteins of eggs, and functional role of eggs for preparation of different dishes 3
4. a) Define egg, and mention the uses of egg including its utilization 5
b) State the hormones responsible for egg formation 3
5. a) What is anti-nutritive factors (ANF)? Mention the ANF available in egg 2
b) Discuss the methods for determination of egg quality 4
c). Mention the misconceptions of egg 2
6. **Give a short note -any five of the following: (1.6 × 5=8)**
 - a) Organic eggs
 - b) Yolk composition
 - c) Balut
 - d) Types of egg
 - e) Egg shell composition
 - f) Bloom
 - g) Egg shell uses
 - h) Poultry egg and egg products

Chittagong Veterinary and Animal Sciences University
MS in Poultry Science -Final Examination
July to December Semester-- 2018
Subject: Poultry Feeds and Feeding -Theory
Course Code: PFF-602
Total Marks: 40; Time: 02 hours

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

1. a) Define feed, medicated feed, feed grade, APP, and anti-metabolites 2
b) State the different types of medicated feeds used for poultry 4
c) Mention the limitations of using non-conventional feeds in poultry 2

2. a) Discuss the relation of poultry nutrition with other subjects 3
b) State the factors that affect voluntary feed intake of poultry 3
c) Enumerate the essential, critical and limiting amino acids of poultry 2

3. a) Discuss the cafeteria, challenge and phase feeding systems of poultry 3
b) State the factors that influence feed preferences of poultry 5

4. a) Enumerate the nutritional diseases that affect poultry 2
b) Discuss the impact of nature and nurture on poultry production 4
c) Distinguish between vegetable and animal proteins 2

5. a) Discuss different strategies for reducing the feed cost of poultry production 3
b) State the feeding management systems of broiler in stress condition 2
c) Discuss the prerequisites and ration formulation strategies for poultry 3

6. **Write short note -any four of the following: (2.0 × 4=8.0)** 8
 - a) Calorie protein ratio
 - b) Pro-vitamins
 - c) Perosis
 - d) EDTA and implants
 - e) Biological value
 - f) Anti-nutritional factors
 - g) Quality control of ready-made feed
 - h) SE and TDN

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Chittagong Veterinary and Animal Sciences University

MS July-December Semester 2018 Final Examination

M. S. in Dairy Science

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 do you mean by 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 importance of lactic acid bacteria? 1.0

2. a) What is 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.

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Chittagong Veterinary and Animal Sciences University

MS July-December Semester 2018 Final Examination

M. S. in Dairy Science

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) How can individual liquid milk processing plants evaluate the quality of raw milk? 3
b) Make a plan for the establishment of milk processing plant with layout. 7
2. a) Briefly describe the HTST milk pasteurization. 6
b) State the effect of homogenization on milk and milk products. Show it diagrammatically. 4
3. a) Define market milk. 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). Packaging of market milk
 - e) Milk chilling.

X

MS in Dairy Science Semester Final Examination
July to December Semester/2018
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 in which Q no. 1 is compulsory. Figure in the right margin indicates full marks).

1. a. Indicate the possible strategies to increase dairy feed and fodder production in developing countries like Bangladesh 4.0
b. Discuss briefly about the morphology, fertilizer dose, time and method of sowing, management and utilization, yield and nutritive value of Napier, Alfa alfa and cowpea fodder. 6.0
2. a. Mention the importance/ purpose of processing dairy feed and fodder. 4.0
b. Discuss briefly about five grain processing methods and indicate the chemical and physical changes occurred during processing of grain. 6.0
3. a. Mention about the anti-nutritional factors in dairy animal feed stuffs. 5.0
b. Discuss briefly about four processing methods for improving the nutritive value of roughages. 5.0
4. a. What do you mean by grassland and grass land management? Indicate the factors that affect nutritional value of grassland. 4.0
b. Classify grasslands based on Climatic Dryness and discuss briefly about tropical grassland. 6.0
5. Write short notes on (Any Four) 2.5×4 =10
 - a. Silage making
 - b. Unconventional feeds for dairy production
 - c. Rotational and Zero grazing
 - d. Maize and Ipil-ipil fodder cultivation
 - e. Poisonous plants for animals

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MS in Dairy Science Semester Final Examination
July to December Semester/2018
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 in which Q no. 1 is compulsory. Figure in the right margin indicates full marks).

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|----|---------------------------------|---|-----------|
| 1. | a. | Indicate the possible strategies to increase dairy feed and fodder production in developing countries like Bangladesh | 4.0 |
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| | b. | Discuss briefly about five grain processing methods and indicate the chemical and physical changes occurred during processing of grain. | 6.0 |
| 3. | a. | Mention about the anti-nutritional factors in dairy animal feed stuffs. | 5.0 |
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| 5. | Write short notes on (Any Four) | | 2.5×4 =10 |
| | a. | Silage making | |
| | b. | Unconventional feeds for dairy production | |
| | c. | Rotational and Zero grazing | |
| | d. | Maize and Ipil-ipil fodder cultivation | |
| | e. | Poisonous plants for animals | |

Chittagong Veterinary and Animal Sciences University

Dept. of Dairy and Poultry Science

Final Examination July-December Semester/2018

MS in Dairy Science

Course: Dairy Farm Planning and Management

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

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

You are a recent graduate of CVASU has been joined in an Agricultural Consultancy Farm as dairy consultant. Last Sunday an entrepreneur has come to you and given a big task for preparation of a dairy project of 150 dairy cows aiming to get sufficient amount of loan from Prime bank. After calculation it was seen that the cost of land, land development, construction, equipments & machineries, dairy cow, preliminary farm operation, inflation & contingency, cost before production and interest during grace period were 8000000/=, 1500000/=, 41655500/=, 9705000/=, 30000000/=, 1385000/=, 4137275/=, 100000/= and 3977226/=, respectively. In addition to that the following information are provided by the entrepreneur.

Name of entrepreneur: Md. Ashique Rahman; Name of the project: Karnaphuli Dairy Complex; Duration of loan: 10 years; Grace period: 6 months; Interest rate/year: 09%;

Calculated detail of equal monthly installment (EMI):

MONTHS	EMI	INTEREST	PRINCIPAL REPAYMENT	OST PRINCIPAL
0				92360001
1	1,208,146	692700	515446	91844555
2	1,208,146	688834	519312	91325243
3	1,208,146	684939	523207	90802036
4	1,208,146	681015	527131	90274906
5	1,208,146	677062	531084	89743822
6	1,208,146	673079	535067	89208754
7	1,208,146	669066	539080	88669674
8	1,208,146	665023	543123	88126550
9	1,208,146	660949	547197	87579353
10	1,208,146	656845	551301	87028053
11	1,208,146	652710	555436	86472617
12	1,208,146	648545	559601	85913016
13	1,208,146	644348	563798	85349217
14	1,208,146	640119	568027	84781190
15	1,208,146	635859	572287	84208903
16	1,208,146	631567	576579	83632324

17	1,208,146	627242	580904	83051420
18	1,208,146	622886	585260	82466160
19	1,208,146	618496	589650	81876510
20	1,208,146	614074	594072	81282438
21	1,208,146	609618	598528	80683910
22	1,208,146	605129	603017	80080894
23	1,208,146	600607	607539	79473354
24	1,208,146	596050	612096	78861259
25	1,208,146	591459	616687	78244572
26	1,208,146	586834	621312	77623260
27	1,208,146	582174	625972	76997289
28	1,208,146	577480	630666	76366622
29	1,208,146	572750	635396	75731226
30	1,208,146	567984	640162	75091064
31	1,208,146	563183	644963	74446101
32	1,208,146	558346	649800	73796301
33	1,208,146	553472	654674	73141627
34	1,208,146	548562	659584	72482043
35	1,208,146	543615	664531	71817513
36	1,208,146	538631	669515	71147998
37	1,208,146	533610	674536	70473462
38	1,208,146	528551	679595	69793867
39	1,208,146	523454	684692	69109175
40	1,208,146	518319	689827	68419348
41	1,208,146	513145	695001	67724347
42	1,208,146	507933	700213	67024133
43	1,208,146	502681	705465	66318668
44	1,208,146	497390	710756	65607912
45	1,208,146	492059	716087	64891826
46	1,208,146	486689	721457	64170368
47	1,208,146	481278	726868	63443500
48	1,208,146	475826	732320	62711180
49	1,208,146	470334	737812	61973368
50	1,208,146	464800	743346	61230023
51	1,208,146	459225	748921	60481192

52	1,208,146	453608	754538	59726564
53	1,208,146	447949	760197	58966367
54	1,208,146	442248	765898	58200469
55	1,208,146	436504	771642	57428826
56	1,208,146	430716	777430	56651397
57	1,208,146	424885	783261	55868136
58	1,208,146	419011	789135	55079001
59	1,208,146	413093	795054	54283948
60	1,208,146	407130	801016	53482931
61	1,208,146	401122	807024	52675907
62	1,208,146	395069	813077	51862830
63	1,208,146	388971	819175	51043656
64	1,208,146	382827	825319	50218337
65	1,208,146	376638	831508	49386828
66	1,208,146	370401	837745	48549084
67	1,208,146	364118	844028	47705056
68	1,208,146	357788	850358	46854698
69	1,208,146	351410	856736	45997962
70	1,208,146	344985	863161	45134801
71	1,208,146	338511	869635	44265166
72	1,208,146	331989	876157	43389008
73	1,208,146	325418	882728	42506280
74	1,208,146	318797	889349	41616931
75	1,208,146	312127	896019	40720912
76	1,208,146	305407	902739	39818173
77	1,208,146	298636	909510	38908663
78	1,208,146	291815	916331	37992332
79	1,208,146	284942	923204	37069129
80	1,208,146	278018	930128	36139001
81	1,208,146	271043	937103	35201898
82	1,208,146	264014	944132	34257766
83	1,208,146	256933	951213	33306553
84	1,208,146	249799	958347	32348206
85	1,208,146	242612	965534	31382672
86	1,208,146	235370	972776	30409896

87	1,208,146	228074	980072	29429824
88	1,208,146	220724	987422	28442402
89	1,208,146	213318	994828	27447574
90	1,208,146	205857	1002289	26445284
91	1,208,146	198340	1009806	25435478
92	1,208,146	190766	1017380	24418098
93	1,208,146	183136	1025010	23393088
94	1,208,146	175448	1032698	22360390
95	1,208,146	167703	1040443	21319947
96	1,208,146	159900	1048246	20271701
97	1,208,146	152038	1056108	19215592
98	1,208,146	144117	1064029	18151563
99	1,208,146	136137	1072009	17079554
100	1,208,146	128097	1080049	15999505
101	1,208,146	119996	1088150	14911355
102	1,208,146	111835	1096311	13815044
103	1,208,146	103613	1104533	12710511
104	1,208,146	95329	1112817	11597694
105	1,208,146	86983	1121163	10476530
106	1,208,146	78574	1129572	9346958
107	1,208,146	70102	1138044	8208915
108	1,208,146	61567	1146579	7062335
109	1,208,146	52968	1155178	5907157
110	1,208,146	44304	1163842	4743315
111	1,208,146	35575	1172571	3570743
112	1,208,146	26781	1181365	2389378
113	1,208,146	17920	1190226	1199152
114	1,208,146	8994	1199152	0

Based on above mentioned scenario and information answer the following questions

1. Draw the layout of the project. 10
2. Show the progress of the herd size from 1st year of farming to loan period 05
3. Show the ratio of equity and loan. 03
4. Calculate the recurring expenditure during loan period. 09
5. Show the annual financial statement of the project during loan period. 05
6. Calculate the gross income of the farm during project period. 03
7. Forecast the annual income of the project during loan period. 05