

Chittagong Veterinary and Animal Sciences University

Dept. of Dairy and Poultry Science

Final Examination July-December Semester/2021

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 have been appointed in an Agricultural Consultancy Farm as dairy consultant. Last Monday 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 Dutch Bangla Bank. After calculation it is seen that the cost of land, land development, construction of establishments, equipments & machineries, dairy cow, preliminary farm operation, inflation & contingency, cost before production and interest during grace period are 8000000/=, 1500000/=, 41655500/=, 970500/=, 30000000/=, 1385000/=, 4137275/=, 100000/= and 3836340/=, respectively. The entrepreneur is expecting loan from the bank only the same amount against the construction of establishments and equipments & machineries, In addition to that the following information are provided by the entrepreneur

Name of entrepreneur: Md. Abdur Rahman; Name of the project: Chattogram Dairy Complex; Location of the project: Charandwip Union, Boalkhali; Duration of loan: 10 years; Grace period: 12 months. Interest rate/year: 09%.

Calculated detail of equal monthly installment (EMI):

MONTHS	EMI	INTEREST	PRINCIPAL REPAYMENT	Outstanding PRINCIPAL
0				46462340
1	629,235	348468	280768	46181572
2	629,235	346362	282873	45898699
3	629,235	344240	284995	45613704
4	629,235	342103	287132	45326571
5	629,235	339949	289286	45037286
6	629,235	337780	291456	44745830

7	629,235	335594	293642	44452188
8	629,235	333391	295844	44156345
9	629,235	331173	298003	43850282
10	629,235	328937	300298	43557984
11	629,235	326685	302550	43255434
12	629,235	324416	304819	42950614
13	629,235	322130	307106	42643508
14	629,235	319826	309409	42334100
15	629,235	317506	311729	42022370
16	629,235	315168	314067	41708303
17	629,235	312812	316423	41391880
18	629,235	310439	318796	41073083
19	629,235	308048	321187	40751896
20	629,235	305639	323596	40428300
21	629,235	303212	326023	40102277
22	629,235	300767	328468	39773809
23	629,235	298304	330932	39442878
24	629,235	295822	333414	39109464
25	629,235	293321	335914	38773550
26	629,235	290802	338434	38435116
27	629,235	288263	340972	38094144
28	629,235	285706	343529	37750615
29	629,235	283130	346106	37404510
30	629,235	280534	348701	37055808
31	629,235	277919	351317	36704491
32	629,235	275284	353952	36350540
33	629,235	272629	356606	35993934

34	629,235	269955	359281	35634653
35	629,235	267260	361975	35272678
36	629,235	264545	364669	349107088
37	629,235	261810	367475	34548612
38	629,235	259054	370181	34170381
39	629,235	256278	372957	33797424
40	629,235	253481	375755	33421609
41	629,235	250663	378573	33043097
42	629,235	247823	381412	32661685
43	629,235	244963	384273	32277412
44	629,235	242081	387155	31890257
45	629,235	239177	390058	31500199
46	629,235	236251	392984	31107215
47	629,235	233304	395931	30711284
48	629,235	230335	398901	30312384
49	629,235	227343	401892	29910491
50	629,235	224329	404907	29505585
51	629,235	221292	407943	29097641
52	629,235	218232	411003	28686638
53	629,235	215150	414085	28272553
54	629,235	212044	417191	27855362
55	629,235	208915	420320	27435042
56	629,235	205763	423472	27011570
57	629,235	202587	426648	26584921
58	629,235	199387	429848	26155073
59	629,235	196163	433072	25722001
60	629,235	192915	436320	25285680

61	629,235	189643	439593	24846087
62	629,235	186346	442890	24403198
63	629,235	183024	446211	23956987
64	629,235	179577	449558	23507429
65	629,235	176306	452930	23054499
66	629,235	172909	456326	22598173
67	629,235	169486	459749	22138424
68	629,235	166038	463197	21675227
69	629,235	162564	466671	21208556
70	629,235	159064	470171	20738385
71	629,235	155538	473697	20264687
72	629,235	151985	477250	19787437
73	629,235	148406	480829	19306608
74	629,235	144800	484436	18822172
75	629,235	141166	488069	18334103
76	629,235	137506	491729	17842374
77	629,235	133818	495417	17346956
78	629,235	130102	499133	16847823
79	629,235	126359	502877	16344947
80	629,235	122587	506648	15838299
81	629,235	118787	510448	15327851
82	629,235	114959	514276	14813574
83	629,235	111102	518133	14295441
84	629,235	107216	522019	13773422
85	629,235	103301	525935	13247487

86	629,235	99356	529879	12717608
87	629,235	95382	533853	12183755
88	629,235	91378	537857	11645898
89	629,235	87141	541871	11104007
90	629,235	83207	545875	10564142
91	629,235	79185	549879	10024277
92	629,235	75060	554175	9484317
93	629,235	70904	558332	8895495
94	629,235	66716	562519	8332976
95	629,235	62497	566738	7766238
96	629,235	58247	570983	7195250
97	629,235	53964	575271	6619979
98	629,235	49650	579535	6040294
99	629,235	45303	583932	5456461
100	629,235	40923	588312	4868150
101	629,235	36511	592724	4275425
102	629,235	32066	597170	3678256
103	629,235	27587	601648	3076608
104	629,235	23075	606161	2470447
105	629,235	18528	610707	1859740
106	629,235	13948	615287	1244453
107	629,235	9333	619902	624551
108	629,235	4684	624551	0

Based on above mentioned scenario and information answer any 6(six) questions from the following where question no.3(three) is compulsory.

1. Show the progress of the herd size from 1st year of farming to 3rd year of farming. 05
2. Calculate the ratio of equity and loan. 05
3. Calculate the recurring expenditures during loan period. 15
4. Show the annual financial statement of the project during loan period. 05
5. Calculate the gross income of the farm during project period. 05
6. Forecast the annual income of the project during loan period. 05
7. Write in short the introduction of the project. 05
8. Create a summery of the project. 05

Chattogram Veterinary and Animal Sciences University

Dept. of Dairy and Poultry Science

Final Examination July-December Semester/2021

MS in Dairy Science

Course: Market Milk Production and Processing

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

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

1. a) Show the BSTI standard of different ingredients and microbial population for market milk. Do you have any criticism of BSTI standard for market milk? 04
b) How many kg each of 31% cream and 3% milk will be required to make 250000 liters of a mixture with 1.029 specific gravity testing BSTI recommended fat%? 06
2. a) What are the different types of special market milk available in world market and how many of country origin special market milk are available in Bangladesh market? 03
b) Mention the name of last addition of country origin special market milk in Bangladesh market. Briefly discuss the manufacturing procedure of that special market milk. 07
3. a) Prepare a layout of milk processing industry considering the market demand of the products. 07
b) List the protocol tests for receiving raw milk in a milk chilling industry. 03
4. a) Mention the common flavour defects, causes and prevention of market milk. 05
b) Discuss the manufacturing procedure of chocolate milk. 05
5. Write short notes on any 4(four) from the following
a) UHT milk b) Effect of homogenization on milk c) Milk preservation techniques
d) Milk chilling e) Judging and grading of milk

Chattogram Veterinary and Animal Sciences University

Dept. of Dairy and Poultry Science

Final Examination July-December Semester/2021

MS in Dairy Science

Course: Advanced Dairy Cattle Production

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

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

1. a) Mention the principles of all dairy production system. 03
b) Explain the components of dairy system. 07
2. 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) How can you utilize breeding register for detecting heat efficiently of a herd? 04
3. a) Mention the current constrains of organic dairy farming in Bangladesh. 03
b) Briefly discuss the USDA,2000 rules of certification for organic dairy products. 07
4. a) What are the reasons behind for recent price hike of raw milk in Bangladesh? 05
b) Illustrate the different methods of payment for raw milk in the world. Which one is more preferred to you and why? 07
5. a) Mention the constrains of commercial dairy farming in Bangladesh under existing climatic and feeding condition and its possible remedies. 07
b) Why is estrous synchronization not practiced in commercial dairy herd in Bangladesh? 03

Department of Dairy and Poultry Science
Chattogram Veterinary and Animal Sciences University
M S July – December Semester Final Examination – 2021
MS in Dairy Science

Course title: Dairy cattle feeds and fodder production and preservation (theory)
Course Code: DFP – 602

Time: 2 hours

Total marks: 40

Answer any four (4) of the following questions. Split answers are strongly discouraged. **4X10=40**

1. a) Describe different types of energy rich concentrates. 5
b) Write short notes on hormones and antibiotics. 5
2. a) Define unconventional feeds. State the importance of unconventional feeds. 5
b) State the importance feeding dairy animals. 5
3. a) What are the methods of conservation of fodder? 5
b) State the principle of silage making. Describe the principle of hay making. 5
4. a) Describe the method of silage making. 5
b) Describe different types of silos. 5
5. a) Define TMR. State the procedure of Preparing TMR for dairy cattle. 5
b) What are the factors responsible for nutrient losses of silage? 5

Department of Dairy and Poultry Science
Chattogram Veterinary and Animal Sciences University
M S July – December Semester Final Examination – 2021
MS in Dairy Science

Course title: Microbiology of milk and milk products (theory)
Course Code: MMP – 602 (T)

Time: 2 hours

Total marks: 40

Answer any four (4) of the following questions. Split answers are 4X10=40 strongly discouraged.

1. a) What do you mean by conjugation, transformation, and transduction? 3
b) Briefly describe the gene expression of different types of bacteria. 7
2. a) Illustrate the mechanisms of antibiotic resistance in food chain. 5
b) Enumerate the risk of fermented foods produced by lactic acid bacteria. 5
3. a) Briefly describe HACCP for dairy products. 5
b) State the common microbial defects and their control in cheese. 5
4. a) Describe molecular methods for microbial identification in dairy products. 5
b) Describe the methods of pure culture production. 5
5. a) What do you mean by milk borne diseases? Enlist the common milk borne diseases. 5
b) State the most important organism for milk borne disease with their sign, symptoms, prevention and control. 5

Department of Dairy and Poultry Science
Chattogram Veterinary and Animal Sciences University
M S July – December Semester Final Examination – 2021
MS in Dairy Science
Course title: Research Methodology (theory)
Course Code: RMD – 602

Time: 2 hours

Total marks: 40

Answer any four (4) of the following questions. Split answers are strongly discouraged. 4X10=40

1. a) Briefly describe the types of research. 5
b) Sketch the 'research process' in a diagram. 5
2. a) Define research problem. Show the process of defining a research problem in a diagram. 5
b) What is a research hypothesis? State the characteristics of a good hypothesis. 5
3. a) What are the different types of sample design? List the characteristics of a good sample design. 5
b) Briefly describe the types of analysis of a research. 5
4. a) What do you mean by interpretation? State the techniques of interpretation. 5
b) State the layout of research report. 5
5. a) What are the different types of reports? 5
b) State the mechanics of writing a research report. 5

MSc Poultry science final examination 2021
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 parent stock for commercial layer in winter.
2. Describe remedy of stress on commercial layer .
3. Write in detail of ventilation in breeding flock.
4. What is hen day and hen housed egg production ? How would you increase hen day egg production 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. Write in detail of the behavioral changes of chicken in stress conditions.
2. How would you ensure seasonal welfare of the broiler chicken ?
3. Write notes on- i) Cannibalism ii) Dominancy iii) Dust bathing and iv) Semi scavenging
4. Describe the stress factors on poultry.

Chattogram Veterinary and Animal Sciences University
MS in Poultry Science final Exam-2021-Theory
Semester-July-December-2021
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) Enlist the issues that we concern and our next generation 2.0
- b) What is feed and feeding? State the strategies how you would reduce the feed cost of poultry 6.0
2. a) What is feeding standard ? Enlist the feeding standard of poultry 2.0
- b) What is diet and ration? Discuss the procedure or steps of formulating balanced ration manually for the broiler chicken 6.0
3. a) What is FCR and FCE ? Discuss the factors that affect the FCR of broiler 5.0
- b) Enlist the ANFs present in poultry feeds and calculate the feed cost of broiler chicken (n=500) up to marketing age 3.0
- 4 .What is VFI and choice feeding system? State the factors that affect voluntary feed intake (VFI) and choice feeding of poultry 8.0
5. a) What is critical, limiting and indispensable amino acids? 2.0
- b) What is calorie, energy and SE? Discuss different sort of energy required for the poultry 4.0
- c) List common feed additive used in poultry and their mode of action 2.0
- 6 a) What is vitamins and minerals ? Enlist the natural feed sources of vitamins and minerals used for enhancing the quality of poultry products (egg and meat) 5.0
- b) State the nutritional specifications required for the optimization of egg shell quality 3.0
7. a) What is feed evaluation or quality? Enlist the methods for evaluating the poultry feed, and discuss one method for assessing protein quality of chicken 5.0
- b). Discuss the procedure for assuring the quality of poultry feed 3.0
8. **Write short note : Any four of the following (4 × 2) =** **8.0**
- a) Unconventional feedstuffs b) SSF c) Nutrigenomics d) Feed digestibility e) Medicated feed
- f) Inclusion level g) Calorie protein ratio h) Gizzarosine i) Phase feeding j) Feed processing

MSc Poultry science final examination 2021
Semester: July-December
Course: Parent stock & Commercial Broiler Management
Course code: PCB-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 breeding flock.
4. Write in detail of the bio security in a commercial broiler farm.

Chattogram Veterinary and Animal Sciences University

MS in Poultry Science final exam-2021-Theory

Semester: July- December-2021

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, balut. HDL, LDL, VLDL | 2.0 |
| b) State the utilization and uses of egg globally | 3.0 |
| c) Discuss the egg anatomy | 3.0 |
| 2. a) Discuss the misconnects of egg consumption | 3.0 |
| b) What is grading ? Discuss egg grading system | 5.0 |
| 3. a) What is toxic factor? Mention the anti-nutritive factors of egg | 3.0 |
| b) State the chemical composition of egg of different species of poultry | 5.0 |
| 4. a) What is protein? Enlist the major proteins in egg albumen and yolk | 3.0 |
| b) Mention the proteins in egg that stimulates allergic action | 1.0 |
| c) Show the detailed composition of egg yolk | 4.0 |
| 5. a).What is egg quality? Discuss the egg quality components & assessment | 4.0 |
| b). Discuss the nutritional factors affecting egg quality | 4.0 |
| 6. a) Enlist egg defects and the causes of deterioration of Egg | 2.0 |
| b) State the microbiological impact on deterioration of egg quality | 6.0 |
| 7. Give a short note -any five of the following: (1.6 × 5)\ | 8.0 |
| a) Egg preservation techniques | |
| b) Food value of egg | |
| c) Mechanism of egg shell formation | |
| d) Egg shell composition | |
| e) Egg marketing | |
| f) Bloom | |
| g). HU | |