Chittagong Veterinary and Animal Sciences University

M S in Animal Breeding and Genetics

January-June Semester Final Examination 2017

Course title: Animal Breeding Principles & Systems

Course Code: ABP-601

Total marks: 40

Time: 2 hour

Answer any 2 (two) questions from the following. Values are indicated in the right margin in each question.

1. a) What do you mean by the term industry structure? Distinguish between close and open nucleus breeding scheme. **5**

   b) Illustrate idealized population and effective population size and indicate their use in animal improvement. **6**

   c) Heritability value is lower than repeatability value for most of the traits- Explain it. **4**

   d) What is breeding objective? List the points those you will consider in order to develop the breeding objective for dairy development. **5**

2. a) What is correlated trait? Design how you will improve the correlated traits in dairy development in Bangladesh. **8**

   b) What do you mean by the term QTL? Write how you will estimate map distance and marker sequences using marker data. **12**

3. a) What is heterosis? Describe the causes of heterosis and explain why heterosis value is higher in F_1 generation. **7**

   b) What is genetic gain? Mention the factors those affects genetic gain of a trait. From Rendel and Robertson (1950) article show why $f1=4.916\alpha f2$ for available replacement. **5**

   c) Calculate the genetic gain using four path way of selection in consideration of MOET and gene manipulation. **8**

Chittagong Veterinary and Animal Sciences University

MS in Animal Breeding and Genetics

January-June Semester Final Examination-2017

Course: **Breeding for disease resistance in farm animals**

Course code: **BDR-601**

Full marks: 40; Time: 2 hours

Date: 07/06/2017

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

1. (a) Distinguish between disease resistance and tolerance. **2**

(b) What are the genetic levels at which animal's resistance to infections can be determined? Justify the considerations at each level to develop a breeding program. **7**

c) If the goal is to stop the spread of zoonoses then which approach would be more prioritized? **1**

2. Discuss the general principles for developing a breeding program for disease resistance. Considering these general principles how do you evaluate the program? **10**

3. a) A cross-sectional survey revealed the incidence of the following diseases in livestock population in Chittagong district. **8**

For cattle

i) Food-and-mouth disease ii) Mastitis iii) Dermatophilosis iv)Helminthosis

v) Trypanosomiasis

For sheep/goat

i) Paratuberculosis ii) Cutaneous myiasis iii) Liver fluke

For chicken

i) Newcastle disease ii) Salmonellosis iii) Coccidiosis

Plan an activity chart consisting of appropriate approaches to develop a genetic control program for each of the above-mentioned diseases.

(a) Distinguish between direct and indirect selection for disease resistance. **2**

4. (a) What is major histocompatibility complex? **2**

(b) Outline the genome rearrangements of B lymphocytes differentiation. **8**

5. (a) Prioritize the challenges you may encounter while selecting for disease resistance. **7**

(b) Breeding for disease resistance is useful and cost effective, justify. **3**

Chittagong Veterinary and Animal Sciences University

Department of Genetics and Animal Breeding

M.S. in Animal Breeding and Genetics

(January – June semester) Final Examination-2017

Course:Conservation Biology and Genetic Diversity

Course code: CGD-601

Total marks: 40; Time: 2 hours

Date: 31/05/2017

Answer any for from the following questions.

1	a)What do you mean by Biodiversity? What are the socioeconomic benefits of biodiversity?	5.0
	b) What should a conservation biologist do?	5.0
2	a)What do you mean by habitat? What are the causes of habitat destruction?	5.0
	b) Write a short note about invasive species.	5.0
3	a)What are the differences between ex-situ and in-situ conservation? Write down the advantages and disadvantages of in-situ conservation.	5.0
	b) What is the role of zoo and wildlife veterinarian for prevention and control of wild animals' diseases?	5.0
4	a) Describe briefly the role of national and international organization for wildlife conservation.	5.0
	b) How you will manage the wetland for wetland species?	5.0
5	a) Describe the method of reintroduction of Royal Bengal Tiger from Bangladesh National Zoo in to the Sundarban.	5.0
	b) Define regionally extinct? How many species are extinct from Bangladesh? Describe briefly about the Indian peafowl extinction from Bangladesh.	5.0

Good luck

Chittagong Veterinary and Animal Sciences University

M S in Animal Breeding and Genetics

January-June Semester Final Examination 2017

Course title: Reproductive Nutrition

Course Code: RPN-601

Total marks: 40

Time: 2 hour

Answer any 2 (two) questions from the following. Values are indicated in the right margin in each question.

1. a) Explain the relationship between nutrition and reproduction. Narrate the reproductive pattern of a ewe. 7
   b) Write down nutritional requirements of a 180 days pregnant cow having 350 kg liveweight and produces 12 liter milk daily. **8**
   c) What is feeding standard? Describe a feeding standard with its limitation which are use under commercial dairy sector. **5**

2. a) Describe the biological framework those determine the cows' herd fertility. 7
   b) Write how you will analyze the dairy herd fertility under cooperative dairying conditions of Bangladesh? **8**
   c) Write how milk compositions determine the milk value? Write in brief the feeding system of heifer. **5**

3. a) Write how will you estimate the protein requirement of a dairy cow? **6**
   b) Describe the management of bull during pre-breeding and breeding period. **6**
   c) Narrate a ration with available feed ingredients for a bull having 600 kg live weight whose dairy live weight gain is 250g/day, this bull is use to serve cow once a week ejaculation volume is 12ml/service **8**

Chittagong Veterinary and Animal Sciences University
MS in Animal Breeding and Genetics
January-June Semester Final Examination-2017
Course: **Genetics**
Course code: **GNT-601**
Full marks: 40; Time: 2 hours
Date: 22/05/2017

Figures in the right margin indicate the full marks. Answer **four** from the following questions, where question no. **5** is **compulsory**.

1. (a) Write down the modern working definition of a gene. **1**

(b) In which conditions the ratios of Mendelian inheritance can be modified? How the existence of a lethal allele can be predicted from a strange finding in the phenotypic ratio. **5**

(c) Suppose you have *Escherichia coli* and *Bos taurus* as your study materials, how do you differentiate them based on genetic background? **4**

2. (a) Illustrate the molecular structure of a eukaryotic chromosome? **4**

(b) Differentiate between Euchromatin and heterochromatin. **2**

(c) For coat color study, a purebred Hereford cow with white face (HHss) and a purebred Simmental cow with white face (hhSS) are supplied to you; mention the possible phenomenon with an explanation. **4**

3. (a) Briefly describe the possibilities for the sex determination in Drosophila. **5**

(b) How autosomes and sex chromosomes can be differentiated from each other. Prepare a table mentioning the sex chromosomes and autosomes for a ram, a hen and a buffalo cow. **3**

(c) Define holandric and sex-linked genes. **2**

4. (a) What is copy number variation? Justify the significance of deletions in higher organisms. **2**

(b) How can inheritance of a trait be affected by inversions in DNA sequence? **3**

(c) How do aneuploidies occur in an organism? Classify and exemplify aneuploidies in animals. **5**

5. (a) Define population genetics. Explain how does a population bottleneck occur and what would be the consequences if there is a population bottleneck? **4**

(b) How can genetic variations in a population be measured? Give an outline. **5**

(c) Define genetic drift. **1**

Chittagong Veterinary and Animal Sciences University
MS in Animal Breeding and Genetics
January to June Semester Final Examination-2017
Subject: Physiology of Reproduction
Course Code: PHR-601
Full marks-40, Time-2 hours

	(Answer any **four** questions from the following and Figure in the right margin indicate full marks)	
1.	a) Illustrate male genital system of a bull and state its main function.	10
	b) What is ovulation? Write down about mechanism of ovulation.	
2.	a) What is reproductive cycle? Discuss the reproductive pattern of cow.	10
	b) Define parturition. Briefly describe about several stages in parturition.	
3.	Explain the maternal and neonatal behavior and its association with neonatal mortality.	10
4.	Write down Short note on (any two): a) Oestrus behavior b) Methods of oestrus detection c) Oestrus synchronization	10
5.	a) What is fertilization? Briefly describe about cleavage.	10
	b) Describe methods of Pregnancy diagnosis in ruminants.	

Chittagong Veterinary and Animal Sciences University
MS in Animal Breeding and Genetics
January to June Semester Final Examination-2017
Subject: Physiology of Reproduction
Course Code: PHR-601
Full marks-40, Time-2 hours

	(Answer any **four** questions from the following and Figure in the right margin indicate full marks)	
1.	a) Illustrate male genital system of a bull and state its main function.	10
	b) What is ovulation? Write down about mechanism of ovulation.	
2.	a) What is reproductive cycle? Discuss the reproductive pattern of cow.	10
	b) Define parturition. Briefly describe about several stages in parturition.	
3.	Explain the maternal and neonatal behavior and its association with neonatal mortality.	10
4.	Write down Short note on (any two): a) Oestrus behavior b) Methods of oestrus detection c) Oestrus synchronization	10
5.	a) What is fertilization? Briefly describe about cleavage.	10
	b) Describe methods of Pregnancy diagnosis in ruminants.	

MSc Poultry science final examination 2017

Course: Poultry farm planning and management

Course code: PPM

(Answer any four of the questions. All questions are of equal marks)

Total marks: 40

Time: 2 hours

Questions:

1. Give planning of a commercial farm for 5000 broiler.
2. Write in details of management practices in a commercial broiler farm.
3. Give planning of a commercial farm for 5000 layer.
4. Write in detail of biosecurity in a commercial layer farm.
5. Give planning of a commercial farm for 5000 duck in semi scavenging system of management.

MS in Poultry Science

Chittagong Veterinary and Animal Sciences University

Course Title: Advanced Biostatistics (Theory)

Course Title: BST-601

Full Marks: 40 Time: 2 hours

Answer any 4 from the following questions. Values are shown in the right margin in each question

1. a)Define Simple Linear Regression with an example. What do you mean by coefficient of determination? State when one can call a model 'GOOD'? 5

   b) Find the strength of relationship between age and weight of the given chickens and comment. 5

Age(day)	6	8	10	12	14	16	18	20
Weight(kg)	.30	.45	.60	.90	.10	1.2	1.5	1.8

2. a)What is critical and acceptance region? What is confidence coefficient of a test? 4

   b) Two groups of goats were fed two different feeds to determine the increase in body weight. At the end of the experiment the body weights were calculated. The mean and variance are given below: 6

	Feed A	Feed B
Mean	4.8	5.1
Variance	0.21	0.25
size	50	50

Which feed will increase the body weight of goats at 5% level of significance?

3. a)Define treatment, block, experimental unit and yield with an example each. 5

   b) Define RBD with a practical example in your field. In what circumstances RBD will turn into CRD. Explain. 5

4. a) Derive the formula to test a population mean with a specific value in case of small samples when population variance is known. 4

   b) 3 different kinds of hormone were applied to 4 blocks of chickens. Are the treatment and block statistically significant?(use 5% level of significance) 6

Block/Treatment	1	2	3
1	1.5	1.3	1.5
2	1.4	1.8	1.6
3	1.35	1.55	1.12
4	1.7	1.1	1.71

5. a)Define Chi square. Write some of it's uses. 4

   b)A certain drug is effective in curing cold. In an experiment on 500 farm owners suffering from cold, half of them were given sugar pills and half of them were given drug. Test the reaction to the treatment on patients: 6

	Helped	Harmed	No effect
Sugar pills	130	40	80
Drug	150	30	70

Chittagong Veterina and Animal Sciences University
Dept. of Da y and Poultry Science
MS i Poultry Science
Final Examination emester: January-June), 2017
Course Title: Poultry I ocessing and Products Technology
Cour Code: PPT-601
Total Ma s- 40; Time: 2 Hours

Answer any 4 (four) of the following qu tions. Each question has equal marks. Figures in the right margin indicate full marks.

1. i) What do you mean by Poultry Proc cts Technology? State the scopes of Poultr 5
   Products Technology in Bangladesh.
   ii) What is table and hatching egg? S e the nutritional composition and food value of 5
   poultry eggs of different species.
2. i) Sketch the flow diagram of broiler ocessing plant. Illustrate the methods of stunning 5
   and scalding used in poultry processi plants.
   ii) Define the following terms:
   Broiler, Fryer-roaster turkey, Green (ose, Marbling, PSE
3. i) Explain briefly about non-meat ing dients used in poultry products? Justify the 5
   economic importance of non-meat in edients in preparation of meat products.
   ii) What is meat preservation? State (ferent methods of poultry meat preservati and 5
   briefly describe two of them.
4. i) What is poultry carcass grading? S marize the mechanisms of grading ready-to-
   cook poultry for marketing.
   ii) What is sharp freezing? State the tors that influence rate of freezing of poult 5
   products.
5. i) Enlist the poultry products (meat a egg) available in the supermarket. Discu - di
   industrial utilization and bakery uses eggs.
   ii) State the procedure of manufactur g Turkey Ham and Chicken Nuggets.

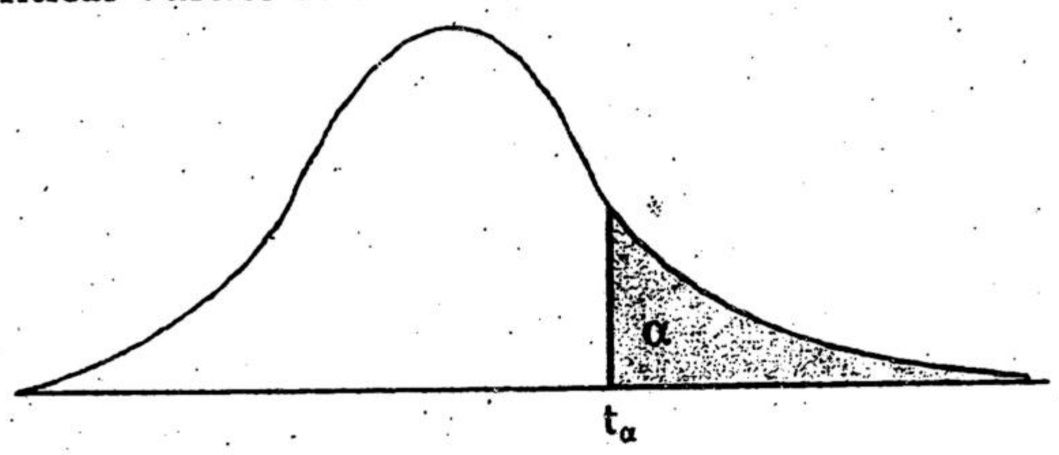
z	0	1	2	3	4	5	6	7	8	9
.0	.5000	.5040	.5080	.5120	.5160	.5190	.5239	.5279	.5319	.5359
+.1	.5398	.5438	.5478	.5517	.5557	.5596	.5363	.5675	.5714	.5753
+.2	.5793	.5832	.5871	.5910	.5948	.5987	.6026	.6064	.6103	.6141
+.3	.6179	.6217	.6255	.6293	.6331	.6368	.6406	.6443	.6480	.6517
+.4	.6554	.6591	.6628	.6664	.6700	.6736	.6772	.6808	.6844	.6879
+.5	.6915	.6950	.6985	.7019	.7054	.7088	.7123	.7157	.7190	.7224
+.6	.7257	.7291	.7324	.7357	.7389	.7422	.7454	.7486	.7517	.7549
+.7	.7580	.7611	.7642	.7673	.7703	.7734	.7764	.7974	.7823	.7549
+.8	.7881	.7910	.7939	.7967	.7995	.8023	.8051	.8078	.8106	.8133
+.9	.8159	.8186	.8212	.8238	.8264	.8289	.8315	.8340	.8365	.8389
+1.0	.8413	.8438	.8461	.8485	.8508	.8531	.8554	.8577	.8599	.8621
+1.1	.8643	.8665	.8686	.8708	.8729	.8749	.8770	.8790	.8810	.8830
+1.2	.8849	.8869	.8888	.8907	.8925	.8944	.8962	.8980	.8997	.9015
+1.3	.9032	.9049	.9066	.9082	.9099	.9115	.9131	.9147	.9162	.9177
+1.4	.9192	.9207	.9222	.9236	.9251	.9265	.9278	.9292	.9306	.9319
+1.5	.9332	.9345	.9357	.9370	.9382	.9394	.9406	.9418	.9430	.9441
+1.6	.9452	.9563	.9474	.9484	.9495	.9505	.9515	.9525	.9535	.9545
+1.7	.9554	.9564	.9573	.9582	.9591	.9599	.9608	.9616	.9625	.9633
+1.8	.9641	.9648	.9656	.9664	.9671	.9678	.9686	.9693	.9700	.9706
+1.9	.9713	.9719	.9726	.9732	.9738	.9744	.9750	.9756	.9762	.9767
+2.0	.9772	.9778	.9738	.9788	.9793	.9842	.9846	.9850	.9854	.9857
+2.1	.9821	.9826	.9830	.9834	.9838	.9842	.9846	.9850	.9854	.9857
+2.2	.9861	.9846	.9868	.9871	.9874	.9878	.9881	.9884	.9887	.9890
+2.3	.9893	.9896	.9898	.9901	.9904	.9906	.9909	.9911	.9913	.9916
+2.4	.9918	.9920	.9922	.9925	.9927	.9929	.9931	.9932	.9934	.9936
+2.5	.9938	.9940	.9941	.9943	.9945	.9946	.9948	.9949	.9963	.9964
+2.6	.9953	.9955	.9956	.9957	.9959	.9960	.9961	.9962	.9963	.9964
+2.7	.9965	.9966	.9967	.9968	.9969	.9970	.9971	.9972	.9973	.9974
+2.8	.9974	.9975	.9967	.9977	.9977	.9978	.9979	.9979	.9980	.9981
+2.9	.9981	.9982	.9982	.9983	.9984	.9984	.9985	.9985	.9986	.9986
+3	.9987	.9990	.9993	.9995	.9997	.9998	.9998	.9999	.9999	1.0000

Note 1 : If a normal variable X is not "standard". Its values must be "standardized" : $Z = \frac{X - \mu}{\sigma}$. That is, $P[X \le x] = \Phi\left(\frac{X - \mu}{\sigma}\right)$.

Note 2 : For $z \ge 4$. $\Phi(z) = 1$ to four decimal places; for $z \le -4$. $\Phi(z) = 0$ to four decimal places.

Note 3 : The entries opposite to z = 3 are for 3.0, 3.1, 3.2, etc.

Table 5. Critical Values of t .



dt	$t_{.100}$	$t_{.050}$	$t_{.025}$	$t_{.010}$	$t_{.005}$	df
1	3.078	6.314	12.706	31.821	63.657	1
2	1.886	2.920	4.303	6.965	9.925	2
3	1.638	2.353	3.182	4.541	5.841	3
4	1.533	2.132	2.776	3.747	4.604	4
5	1.476	2.015	2.571	3.365	4.032	5
6	1.440	1.943	2.447	3.143	3.707	6
7	1.415	1.895	2.365	2.998	3.499	7
8	1.397	1.860	2.306	2.896	3.355	8
9	1.383	1.833	2.262	2.821	3.250	9
10	1.372	1.812	2.228	2.764	3.169	10
11	1.363	1.196	2.201	2.718	3.106	11
12	1.356	1.782	2.179	2.681	3.055	12
13	1.350	1.771	2.160	2.650	3.012	13
14	1.345	1.761	2.145	2.624	2.977	14
15	1.341	1.753	2.131	2.602	2.947	15
16	1.337	1.746	1.120	2.583	2.921	16
17	1.333	1.740	2.110	2.567	2.898	17
18	1.330	1.734	2.101	2.552	2.878	18
19	1.328	1.729	2.093	2.539	2.861	19
20	1.325	1.725	2.086	2.528	2.845	20
21	1.323	1.721	2.080	2.518	2.831	21
22	1.321	1.717	2.074	2.508	2.819	22
23	1.319	1.714	2.069	2.500	2.807	23
24	1.318	1.711	2.064	2.492	2.797	24
25	1.316	1.708	2.060	2.485	2.787	25
26	1.315	1.706	2.056	2.479	2.779	26
27	1.314	1.703	2.052	2.473	2.771	27
28	1.313	1.701	2.048	2.467	2.763	28
29	1.311	1.699	2.045	2.462	2.756	29
∞	1.282	1.645	1.960	2.326	2.576	∞

Source : From "Table of percentage Points of the t-Distribution," *Biometrika* 32 (1941): 300 Reproduced by permission of the *Biometrika* Trustees.

Chittagong Veterinary and Animal Sciences University

Dept. of Dairy and Poultry Science

MS in Dairy Science Final Examination/Jan.-June,2017

Course: Quality Control of Dairy Products

Course Code: QCD-601; Total Marks: 40

Time: 2 hours

You are a recent graduate of Chittagong Veterinary and Animal Sciences University & have been appointed as a Quality Control Officer in Bangladesh Standards and Testing Institution. At the 25th day of appointment you have assigned by your authority to investigate the quality of market milk and butter of different brands available in Bangladesh. Your controlling authority had remind you that being a employee of BSTI, you have reserved the right to collect the samples either from any dairy processing unit or products marketing channels but remember processors also have the right to challenge your test results before the honourable court. You have collected the samples following the protocol of BSTI and after testing in the reference laboratory you got the following results:

a) Market Milk: You have collected the samples from processing plants of respective brands.

Brands	BF%	SNF%	Protein%	Lactose%	Minerals%	Coliform/ ml	TVC CFU/ml	Posphatage test
A	3.3	8.9	3.0	5.2	0.6	01	20000	-Ve
B	3.6	8.3	3.4	4.3	0.66	11	58000	+ve
C	3.5	8.3	3.21	4.4	0.7	2	15500	-ve
D	3.5	8.3	3.3	4.4	0.71	1	17000	-ve
E	3.5	8.5	3.30	4.40	0.71	3	47000	+ve
The taste, colour and appearance of all samples were normal but rancid flavour was in brand E.								

Answer the following questions in relation to the above scenario (a).

1. Critically analyse the quality of different brands against the BDS 1702:2002 requirements for market milk. 8
2. What test was mandatory for sample A & why? 2
3. What were the possible causes of rancid flavour in brand E. 5
4. What should be the packaging materials of market milk & recommended protocol of BSTI to be followed by the dairy processors for aseptic packaging of market milk? 5

b) Butter: You have collected samples from different departmental stores

Brands	Fat%	Moisture%	MSNF	Nacl	Food Additive mg/kg
A	77.30	18	2.45	1.95	30 (annato extracts)
B	80	17	2.15	0.65	10 (annato extracts)
C	80.30	16	1.00	2.5	20 (annato extracts)
D	80	18	0.70	1.00	30 (annato extracts

Answer the following questions in relation to the above scenario (b)

5. What were the procedures you followed for collecting and testing the samples? 7
6. List the BSTI recommended food additives and acidity regulators with maximum inclusion level for butter. 5
7. Make a comparison of quality among the brands and which brand is more acceptable to you as per BDS/CAC-A-1:2002. 8

MS in Dairy Science Semester Final Examination
January to June Semester 2017
Sub: Dairy Nutrition (DNT- 601)
Full Marks: 40; Time: 2 Hours

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

1. a) Explain bypass protein, inert fat and bypass anthalmentics? 4
   b) Discuss the importance with example of bypass protein in high yielding dairy cows. 6

2. a) What is fermentation? Discuss primary & secondary fermentation in ruminant. 4
   b) Briefly discuss the modern techniques available to maintain our dairy cattle. 6

3. a) What is ration? Discuss briefly about area specific mineral mixture. 4
   b) Formulate a daily ration chart for a dairy cow using available feed ingredients which having body weight 300 kg offering milk 15 litres per day. 6

4. a) Discuss how the composition of milk varied upon the offered feed. 4
   b) What is feeding standard? Discuss the feeding standard for growth of a cattle. 6

5. a) Briefly discuss the possible ways of feeding urea to a ruminant. 4
   b) What do you mean by digestibility? Briefly discuss the factors that affect digestibility of a feed. 6

6. Write short notes (any 4) on: 4x2.5 = 10

   a) Apparent vs true digestibility,
   b) UDP vs RDP,
   c) Calf feeding,
   d) Proximate analysis scheme,
   e) Evaluation of feed quality,
   f) Feed additives

Chittagong Veterinary and Animal Sciences University

M S in Poultry Science

January-June Semester Final Examination 2017

Course title: Poultry Breeding

Course Code: PBR-601

Total marks: 40

Time: 1 hour

Answer any 2 (Two) question from the followings. Values are shown in the right margin in each question.

1. a) What is poultry breeding? Write down the objective of poultry breeding for poultry improvement with example. **5.0**
   b) Wright in brief about the polyphyletic and monophyletic theory for the development of modern chicken. **5.0**
   c) What are the assessment criteria of birds for the development of meat type chicken. **10.0**

2. a) For selecting a birds for egg purpose discuss the basic points with example. **8.0**
   b) What is selection index? Calculate the Osborne index with the following information Egg production of 60 wks age on pullet is given below. These pullets are the offspring of 4 sires mated to two dams each and having 3 progeny from a single hatch. **12.0**

Sire	Dam	Progeny Egg production		
		1	2	3
1	1	249	239	237
	2	243	241	234
2	1	243	260	234
	2	265	251	245
3	1	241	244	271
	2	255	253	255
4	1	240	243	254
	2	256	242	188

The flock average is 250 eggs and heritability of e production is 0.30. Calculate Osborne index value of each bird for selecting the top ranking females. Draw your valid conclusion, (b_1=1.143 and b_2= 1.524).

Or,

Develop a multitrait selection index (SI) for the objective of meat production in order to select best top chicken.

3. a). Distinguish between general combining ability and specific combining ability . **5.0**
   b) Write in detail how you will develop a commercial layer. **10.0**
   c) Explain the term reciprocal recurrent selection and effective population size. **5.0**

Chittagong Veterinary and Animal Sciences University (CVASU)

Department of Dairy and Poultry Science

MS in Poultry Science

Final Exam 2017

First Semester (Jan to Jun)

Course Title: Marketing of Poultry and Poultry Products

Course Code: MPP-601

Total Marks: 40, Time: 2.00 Hours

Instructions:

1. *Answers should be **specific** and **brief**.*
2. *All parts of a single question need to be answered without breaking the sequence.*

Mandatory Part (Marks: 10)

Answering to these questions is mandatory

1. Discuss the history of Poultry Industry in Bangladesh.	5
2. Discuss Vertical Integration. Criticize whether vertical integration can be implemented in Bangladesh.	5

Selective Part (Marks: 30)

Please answer to any 3 (three) from the below questions:

1. A. Name the Poultry Products available in Bangladesh. Show the importance of Poultry Products. B. Show the reasons for the increase of the demand of the Poultry Products. C. "Marketing is a process by which companies create value for customers and build strong customer relationships to capture value from customers in return"- Explain it.	3 2 5
2. A. Identify 4 Pillars of Marketing Concept. B. Does Marketing add value? Justify your answer. C. Show how Macro Environment impacts a Poultry Farm?	2 3 5
3. Suppose you are working for Marketing of CP "Ready to Cook" food. A. Propose some ideas on how to increase the Value of your product. B. Develop a chain to distribute your product to the consumers.	5 5
4. A. Demonstrate a typical Marketing System of the Poultry industry. B. Hypothetically select ONE company or organization or institution. Show the 7 Ps of that company or organization or institution. C. Propose your recommendations for Future Policy Direction after discussing the challenges of the Poultry industry.	3 3 4
5. A. What are the market risks? B. Show the basic Risk Management Strategies? C. How do you calculate ROI? D. You have two Strategic Business Units (SBU). First year calculation says one is giving 25% ROI and another one is giving 15% ROI. Which one is better and why?	1 3 3 3

Chittagong Veterinary and Animal Sciences University
MS in Poultry Science Final Examination
January to June Semester 2017
Subject: Ducks and Specialized Fowl Production-Theory
Course Code: DSF-601
Total Marks: 40. Time: 02 hours

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

1. a). Discuss the prospect of rearing duck over chicken in Bangladesh — 3
   b). State the economic traits of commercial importance for selection of meat type duck — 3
   c). **Mention the dissimilarities of Muscovy duck in compared to Mallard duck** — 2

2. a). State the special characteristics of quail, guineafowl and pigeon farming — 4
   b). 'Quail farming is better than chicken farming'—justify this — 3
   c). **'Chinese fowl is a variety'** ----- explain — 1

3. a). Mention the strategy of lean meat and green meat production for healthy lifestyle — 2
   b). State the integrated farming system with example — 3
   c). Discuss the process for ejection of avian lactation — **3**

4. a). Give the composition of pigeon ration & calculate the feed requirement for rearing 10 pairs of breeder pigeon up to one year — 3
   b). State the hatching, incubation and feeding of squab — 2
   c). Discuss the breeding practices of Turkey — 3

5 a). Narrate the brooding and rearing management of duckling, gosling and keet — 4
   b). State the strategy for improving local or indigenous duck breed — 3
   c). **Mention the category of Turkey** — **1**

6. **Write short notes on any five of the following : (1.6 ×5)** — 8

a). Animal crop
b). Squab
c). Dovecote culture
d). Run
e). Worst mother
f). Watch dog
g). Pinioning
h). Mule duck
i). Crippling disease

Chittagong Veterinary and Animal Sciences University
Department of Physiology, Biochemistry and Pharmacology
MS in Pharmacology January-June Semester Final Examination-2016
Course Title: General Toxicology
Course Code: GTL-601
Total Marks: 40.0; **Time:** 2 hours

Figures in the right margin indicate full marks. Answer any ***Four (4)*** *questions from the followings:*

1. a) Define toxinology. Justify the implications of forensic and regulatory toxicology in medical science. 3.0
   b) Classify the toxicant on the basis of frequency and duration of exposure and toxicity potential. 3.0
   c) Write down the mechanisms of toxicity in relation to a toxicant. 4.0

2. a) Define residual poisoning. What is the metabolic fate of a toxin? 2.0
   b) What is LD_{50}? How LD_{50} used to evaluate the extent of toxicity of toxicant in the body? 3.0
   c) Explain the term "Universal antidote"? How will you build up a toxicological laboratory for maintaining proper diagnostic protocols? 5.0

3. a) List the factors that influencing the toxicity of nitrate in cattle. What is the common mechanism of nitrate poisoning in cattle? 4.0
   b) Differentiate nitrate poisoning from other common toxicant which causes haemo-toxicity? 3.0
   c) What is Toxaemic Jaundice? How will you diagnose and manage the case? 3.0

4. a) Now-a-days, how human are exposed to lead poisoning? What are the symptoms you observed on that case? Write about the line of treatment of it. 5.0
   b) How will you diagnose chronic arsenic poisoning in human? Write down the clinical management of that case. 5.0

5. a) Define hazard. 1.0
   b) Write short note (any three): 9.0
      i) Blind staggers
      ii) Teart disease
      iii) Common salt poisoning
      iv) Physico-chemical properties of toxicant

January-June MS in Pharmacology Final Examination-2016
Department of Physiology, Biochemistry and Pharmacology
Faculty of Veterinary Medicine
Chittagong Veterinary and Animal Sciences University
Course Title: Chemotherapy; Course code: CHT-601
Total Marks: 40; Time: 2.00 hours

Answer any four (4) questions from the following:

Q1.	a. Write down the mechanism of action of potentiated sulfonamides and penicillin.	5.0
	b. What are the unwanted effects of sulfonamides and penicillin on host? Write down the precaution of them.	5.0
Q2.	a. Define fluroquinolones. Write down the mechanism of action and clinical application of ciprofloxacin.	5.0
	b. Write down the mechanism of action of tetracycline. Why tetracycline is contraindicated to production and early life of development.	5.0
Q3.	a. Write down the mechanism of action of Gentamycin and Streptomycin.	5.0
	b. Write down the clinical application of Griseofulvin, Amphotericin-B and Nystatin with doses.	5.0
Q4.	a. Write down the mechanism of action of Acyclovir and Gancyclovir.	5.0
	b. Write down the clinical application of Amantadine and Ribavirin with doses.	5.0
Q5.	Write short notes on (any four): 2.5x 4 a. Antiseptics and disinfectants b. Chloramphenicol c. Macrolides d. Enrofloxacin e. Cephalosporin f. Metronidazole	10

Chittagong Veterinary and Animal Sciences University

Department of Physiology, Biochemistry & Pharmacology

MS (Pharmacology)

Final Examination-2016

January – June Semester

Sub: Food Toxicology & Public health (FTP-601)

Total Marks: 40 Time: 2 hours

Answer the following questions (Any four):

1. a. Define Health, Hygiene & Public health. 3
   b. What do you mean by zoonoses & zoonotic disease? 2
   c. Make a list of at least ten zoonotic disease with their principal animal's involved, probable means of spread to humans & clinical manifestations in humans. 5
2. a. Differentiate food & feed. How food contamination occur generally. Identify the sources of food contamination and distinguish between them. 4
   b. Enumerate the sources of bacterial contaminations of pediatric milk & milk products. 3
   c. What causal organisms must act to cause spoilage of an undamaged shell egg? 3
3. a. Define & classify food borne disease and present them in a schematic manner. 4
   b. Outline briefly the epidemiological factors that influence the type of food-borne hazards. 3
   c. What do you mean by disease outbreak? Mention the major categories considered in developing an outbreak case definition. 3
4. a. Differentiate food security & food safety. Write down the food adulteration & public health issues in Bangladesh. 5
   b. What are the food safety basic laws? How fresh milk is usually adulterated & how artificial milk is being prepared? 5
5. **Short note : (any five)** 2 x 5 = 10

   (a) Melamine in Food; (b) Ready to eat foods; (c) Tobacco poisoning;

   (d) Antibiotic free low cholesterol egg; (e) Aquatic Biotoxins; f) HACCP

Chittagong Veterinary and Animal Sciences University

Department of Physiology, Biochemistry & Pharmacology

MS (Pharmacology)

Final Examination-2016

January – June Semester

Sub: Phytotoxicology (PTL-601)

Total Marks: 40 Time: 2 hours

Answer the following questions (Any four):

1.	a.	Define toxicology, phytotoxicology & zootoxicology? Why poison in plant?	3
	b.	What do you mean by toxic principles & what are the toxic principle of Dhutara, Karabi & Rali with their scientific name.	3
	c.	Describe common diagnosis & treatment protocol of plant poisoning.	4
2.	a.	What do you mean by toad stools? How many spp. of mashroom causes poisoning for human. Write their common name, genera, Spp. Family, Toxic constituents syndrome & treatment any five of them.	5
	b.	Make a list of poisonous plants which effects nervous system blood circulation & causes stonmatitis in small animals .	5
3.	a.	How marijuana. Hemp & hashish cause poisoning in human beings write down the poisonous principal, clinical signs, treatment & prevention of them.	5
	b.	Define cyanogenesis? Write down the sources, m/a, Pathogenesis, Lab diagnosis and treatment of cyanide poisoning.	5
4.	a.	List the estrogenic poisoning plants. Write down toxic constituent, m/a, clinical sign, diagnosis & treatment of estrogenic plant poisoning.	5
	b.	Define & classify photo sensitization. List of photosensitizing agents, toxic constituent, m/a clinical sign, diagnoses & treatments of photosensitization.	5
5.	a.	What do you mean by arsenicals, arsenides, arsenates, arsine a arsenates? Write down the physical & chemical properties sources of exposure, primary symptoms, diagnosis and treatment of arsenic poisoning in livestock.	5
	b.	How you differentiate Arsenic poisoning between human and animal health? How arsenic effect on the body enzymatic system?	5