DVM 2nd Year 2nd Semester Final Examination-2023

Course Title: Poultry Nutrition and Feed Milling Technology

Course Code: PNT-202 (T)

Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer **three (3)** questions from each section where question number **1 and 5** are compulsory. Use separate answer script for each section. Fraction of the questions must be answered together.)

SECTION-A

1. a) Illustrate the digestive system of poultry. List the enzymes secreted by different parts of the digestive system. 2+1=3
   b) Discuss the logical steps for evaluation of poultry feeds. 4
   c) Mention the strategies could be adopted to reduce feed cost in poultry farming. 4

2. a) Define mycotoxin. State the impact of mycotoxins on poultry health. 1+3=4
   b) What is feed additives? Discuss their roles in poultry nutrition. 1+3=4
   c) Define anti-nutritional factors. List the common feed ingredients in Bangladesh that may contain anti-nutrients with their possible ways of minimize. 1+3=4

3. a) Explain macro and micro minerals with examples. 4
   b) Define inter-relationship. Write the inter-relationship between selenium and vitamin E. 1+3=4
   c) Suppose Mr. Karim has a broiler farm with a capacity of 5000 birds per batch and rear broiler for 35 days for each batch. Average weight per bird is 2 kg. He will continue 8 batches per year maintaining 1.5 FCR. Calculate the yearly required total amount of feed for this farm. 4

4. a) Define essential amino acid. List the essential amino acids required for different species of commercial poultry. 1+3=4
   b) Justify the concepts of semi-essential amino acids with examples. Discuss the synergistic and antagonistic relationships of amino acids for poultry with example. 2+2=4
   c) 'Plant' or 'animal' which sources of protein is the best for poultry and why? Justify your answer with arguments. 4

SECTION-B

5. a) Define phase feeding. Discuss the importance of phase feeding in a high yielding commercial laying flock. 1+2=3
   b) Discuss the calorie protein ratio (CPR). What is the ultimate consequence of widening or converging CPR in a broiler finisher diet? 2+2=4
   c) Make a comprehensive list of deficiency symptoms of different vitamins in poultry. 4

6. a) Discuss the most intricate factors that regulate FCR in poultry. 4
   b) Suggest guidelines for feeding commercial broiler from 1st to 28th day. How should you minimize heat stress in broiler? 2+2=4
   c) What are the precautions of feeding replacement pullets? How should you minimize wastage of feed in poultry? 2+2=4

7. a) What are principal steps of pelleting? Critically compare and contrast different forms of poultry feeds in a tabular form. 2+2=4
   b) Compare the merits and demerits of different types of grinders and mixers used in a modern feed mill. 4
   c) Discuss the detail mechanisms for digestion of lipids in poultry. 4

8. Write short notes **(any three)** on: 3x4=12
   i) Cage layer fatigue
   ii) Gene editing for feed efficiency
   iii) AI-empowered feed formulations
   iv) Omega-3 and omega-6 fatty acids

Chattogram Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination-2023
Course Title: Systemic Bacteriology & Mycology
Course Code: SBM-202 (T)
Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any **four (4)** questions from each section where question number **One (1) and Five (5)** are compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

1.	a)	Name three Gram +ve and Gram -ve bacteria.	3
	b)	Illustrate McFadyean's reaction. Describe the criteria for classifying bacteria.	2+4=6
	c)	Define following terms: serovar, biotype, strain, isolates.	2
2.	a)	Describe the Lancefield classification of Streptococci.	3
	b)	State the growth characteristics of the zoonotic bacteria causing wool sorter's disease.	4
	c)	Explain the term 'acid fast'. Distinguish the *Mycobacterium* species among human, dog and poultry.	1+4=5
3.	a)	Name the microorganism along with the media in which following conditions are produced: i) Metallic sheen ii) Medusa-headed colony iii) Cotton wool like growth iv) Fried-egg appearance v) Bottle-brush growth vi) Inverted fir tree growth.	6
	b)	Define PPD. Write down the procedure of identifying *Brucella* from an aborted fetus.	1+5=6
4.	a)	Define fungi. Describe the asexual spores produced by fungi.	1+2=3
	b)	Explain CAMP test and Nagler's reaction.	4
	c)	Differentiate among Gram positive cocci in the context of biochemical reactions.	5

SECTION-B

5.	a)	Explain the following terms with causal agents: i) Equine fancy ii) Timber tongue iii) Loin disease iv) Pink eye v) Infectious coryza vi) Equine lymphangitis vii) Lumpy wool viii) Greasy pig disease ix) Q Fever x) Lyme disease xi) Foot rot xii) Diamond skin disease	0.5 × 12=6
	b)	Write down the antigenic nature of *E. coli*. Illustrate the procedure for the isolation and identification of *Salmonella*.	2+3=5
6.	a)	Briefly describe the cell constituents of Mycobacteria. How can you diagnose the pathogen causing crop mycosis in poultry.	4+4=8
	b)	State the principal characteristics of *Haemophilus influenzae* and *Corynebacterium renale.*	2+2=4
7.	a)	Describe the virulence factor of *Bacillus anthracis*. Write down the growth characteristics of *Bacillus anthracis* and *Pseudomonas aeruginosa.*	3+3=6
	b)	Enlist the toxins produced by different *Clostridium* species. How can you diagnose Fowl Cholera in chicken?	2+4=6
8.	a)	Describe the morphology and cultural properties of *Aspergillus fumigatus* and *Malassezia pachydermatis*.	3.5+3.5=7
	b)	Summarize the principal characteristics of important veterinary Dermatophytes.	5

Course Title: Pet and Small Ruminant Production (Theory)
Course Code: PSR-202(T)
Full Marks: 35., Time: 2 Hours

(Figures in the right margin indicate full marks. Answer any **THREE** (3) questions from each section where question number **1(one)** and **8 (eight)** are compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

1.	**a)**	Enlist the goat origin. What are the common breeds of goat?	**0.5+0.5=1.0**
	b)	Briefly describe the different type of goat house with sketch.	**2.0**
	c)	State the prospects of goat farming in Bangladesh. Briefly describe the limiting factors of Black Bengal goat production?	**1+1=2.0**
2.	**a)**	Which breeding method is most suitable for improving the Black Bengal goat breed? Explain briefly with a diagram.	**1+1=2.0**
	b)	Enlist the production and reproduction aspects/characteristics of Black Bengal and Jamunapari goats.	**2.0**
	c)	Differentiate between sheep and goat in terms of their nutrition and peculiarities of feeding.	**1.0**
	d)	What are the ingredients and their proportions needed to prepare 500g of milk replacer?	**1.0**
3.	**a)**	How are sheep breeds classified based on their wool production?	**1.0**
	b)	Give a flow chart for herd management practices of Sheep.	**1.0**
	c)	State the productive and reproductive characteristics of native sheep.	**1.0**
	d)	Can you briefly explain the feeding management of sheep at different stages of growth.	**3.0**
4.	**a)**	Define the following terms: Stud, Brood Bitch, Pack, Whelping, Neutering	**1.0**
	b)	Illustrate some common training methods of dog.	**2.0**
	c)	Briefly describe the feeding of dog.	**1.0**
	d)	How will you control the aggressive behavior of your dog?	**2.0**

SECTION-B

5.	**a)**	Describe the process of grooming a cat.	**3.0**
	b)	How will you provide care to orphan kitten?	**3.0**
6.	**a)**	How are dog breeds classified?	**2.0**
	b)	What are the points to be considered for selection of a dog?	**2.0**
	c)	Write down the services rendered by dogs in our society.	**2.0**
7.	**a)**	State the prospects of sheep farming in Bangladesh.	**3.0**
	b)	What are the constraints of sheep farming in Bangladesh.	**3.0**
8.	**a)**	What are the ancestral origins of sheep?	**1.0**
	b)	Mention the feeding systems of goat. Which feeding system is adopted for rearing goat in an area where lands are unproductive and dry. Mention the advantages and disadvantages of that system.	**1+1+1=3.0**
	c)	What are the benefits and drawbacks of the stall-feeding system in goat farming in Bangladesh?	**2.0**

Course Title: Biostatistics
Course Code: BST-202 (T)
Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any **four (4)** questions from each section where question number **1 and 6** are compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

1. a) Discuss the importance of the subject Biostatistics as a discipline of science. 4

   b) Discuss the different scales of measurement of variable. Classify the following variables with respect of scales of measurement: 4
   i) Breeds of cow ii) No. of female goat in the farm of CVASU iii) Weights of 100 calves in kg iv) Body temperature of animals.

2. a) Discuss dispersion with different types of measures. 5

   b) Choose the answer of the following two statement : 2+2=4
   i) An appropriate diagram to show the frequency distribution of a continuous variable is- a) A histogram b) A pie chart.
   ii) An appropriate measure of central tendency for continuous data that are skewed to the right is- a) The arithmetic mean b) The median.

3. a) Draw scatter diagram showing positive, negative and no correlation. When is a correlation said to be perfect? 3+2=5

   b) State the additive and multiplicative laws of probability. 4

4. a) Three different formulated feeds were given to 30-day-old chicks to observe their weight gain after a certain period of time. How can you explain whether or not the mean weight difference is significant for different feeds? 5

   b) Compare between: Null and alternative hypothesis; Mutually exclusive events and conditional events. 4

5. a) Define normal distribution with properties. Write the importance of normal distribution. 3+2=5

   b) State the application situations of chi-square test and F test. 4

SECTION-B

6. a) A study revealed that the higher amount of green grass intake related to higher milk fat content. Explain the statistical tools to define this relation and state the properties of it. 4

   b) Write down the test of significance of correlation coefficient. 4

7. a) Define kurtosis. Discuss different types of kurtosis. You are given μ_2=8.52 and μ_4=89.3 from a distribution. Find out kurtosis and comment on the shape of the distribution. 1+3+1=5

   b) Explain the test of significance of independence of attributes. 4

8. a) Research indicates that the duration of lactation varies with parity. Specifically, it has been observed that for each additional parity, the length of lactation deceases by approximately 15 days after a certain age. How can you quantify this relation? Define and write down the properties of this terminology. 1+4=5

   b) Indicate in each case whether true or false: i) In a positively skewed curve, mean < median < mode ii) Mean and variance are equal for binomial distribution iii) The second central moment doesn't indicate the variance iv) A leptokurtic curve is neither too much flattened nor too much peaked. 4

9. a) A group of intern students visited a cattle farm where the owner claimed that the prevalence of bovine viral diarrheal disease was 0.01. How can you determine whether the owner's claim is significantly different from it or not? 5

   b) Describe the difference between randomized block design and latin square design 4

10. Write short notes (any three) to the followings: 3x3=9
    i) Five summary measures ii) Rank correlation and its properties
    ii) Stratified random sampling iv) Principles of design of experiment
    v) Multiple comparison tests.

Chattogram Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination-2023
Course Title: General Pharmacology (Theory)
Course Code: GPH-202 (T)
Full Marks: 35, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer any **THREE (3)** questions from each section where question number **1** is compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

1.	a)	Elucidate the process of drug biotransformation, focusing on it's pharmacodynamics implications.	3
	b)	How does the blood-brain barrier regulate drug entry into the central nervous system?	2
2.	a)	Evaluate the impact of improper prescription writing on patient safety.	3
	b)	Design a basic prescription for a patient suffering from a bacterial infection, ensuring all necessary components are included.	3
3.	a)	Define emetics and anti-emetics. Provide two examples of each.	2+1=3
	b)	Explain the role of laxatives and purgatives in gastrointestinal treatment.	3
4.	a)	Define bioavailability, plasma half-life, therapeutic index and first-pass metabolism.	3
	b)	Explain the difference between drug agonism and antagonism at the receptor level.	3

SECTION-B

5.	a)	Classify local anesthetics based on their duration of action, providing specific examples of each category.	3
	b)	Illustrate parasympathomimetic drugs, providing examples and discussing their roles in veterinary therapeutics.	3
6.	a)	Describe the clinical uses and mechanism of action of anti-emetics in veterinary practice.	3
	b)	Explain the mechanism of action of antacids and proton pump inhibitors in the treatment of gastric ulcers in animals.	3
7.	a)	Sketch the structure of the nephron and explain it with the various diuretic classes, providing examples for each.	3
	b)	Explain the mechanism of action of salbutamol, focusing on its pharmacological effects.	3
8.	a)	A patient is experiencing an adverse drug reaction. Explain the possible factors that could alter their drug response.	3
	b)	Write down the significance of pharmacokinetics in different drug action.	3

Chattogram Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination-2023
Course Title: General Pathology II and Nutritional Pathology
Course Code: GNP-202 (T)
Full Marks: 35, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer any **THREE (3)** questions from each section where question number **1** is compulsory. Use separate answer script for each section. Fractions of the questions are encouraged to answer together.)

SECTION-A

1. a) 'Inflammation is a beneficial phenomenon'-explain on the basis of cardinal signs of inflammation. 2
   b) Briefly describe the vascular events in inflammation. 3

2. a) What is autoimmunity and how autoimmunity is produced against body tissue? 3
   b) What do you mean by SLE? Write down the mechanism of SLE. 1+2=3

3. a) Define and classify haemorrhage. How will you differentiate haemorrahge from haemorrhagic inflammation? 2+2=4
   b) Mention the types of thrombus. Which thrombus can easily produce thrombo emboli? 1+1=2

4. a) What do you mean by edema? Write down the mechanism of renal edema. 1+2=3
   b) Write down the microscopic lesions of any three (3) of the following. 3×1=3
   i) Equine rahbdomyolysis ii) Granulation tissue iii) Congestion
   iv) Abscess

SECTION-B

5. a) Write down the occurrences and pathology of haemorrhagic inflammation. 2
   b) What are the inflammatory cells found in chronic inflammation? Write down the function of lymphocytes. 1+1=2
   c) Explain the role of any two chemicals that mediate inflammation. 2

6. a) Define hypersensitivity. Explain with diagram the mechanism of hypersensitivity reaction after exposure to pollen grains. 1+2=3
   b) How does humoral immunity combat with a foreign antigen? 3

7. a) Which disease condition may affect the weight bearing muscles of a calf? Write down its cause, pathogenesis and pathology. 1+4=5
   b) Mention any four vitamins deficiency diseases found in animals. 1

8. Write short note on any two (2) of the following. 3x2=6
   i) Brown induration of lung
   ii) Shock
   iii) Repair

Program: Veterinary and Animal Science
DVM 2nd Year 2nd Semester Final Examination-2023
Course Title: Veterinary Nematology
Course Code: VNM-202 (T)
Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any **FIVE (5)** questions from each section. Use separate answer script for each section. Fractions of the questions are encouraged to answer together.)

SECTION-A

1. a) What is roundworm? Mention the cuticular modification of nematodes with example. 4
   b) Draw different types of oesophagus of nematodes with example. 3

2. a) Recognize the mode of transmission of parasitic nematodes with examples in each case. 3
   b) Briefly describe the general preventive and control measures against nematodiasis in a dairy herd. 4

3. a) Diagnose the following parasites through adult morphology. 0.6×5 ~~0.5×6~~=3
   i). *Ostertagia ostertagi* ii). O*xyuris equi* iii). *Setaria digitatus*
   iv). *Ancylostoma caninum* v) *Strongylus vulgaris*
   b) List four (4) roundworms of chicken. Sketch the life cycle of 'gapeworm' in chicken. 1+3=4

4. a) Enlist nematodes that are transmitted through 'skin penetration', 'transmammary' and transplacentally. 3
   b) Write down the pathogenesis and clinical findings of 'canine heartworm disease' in stray dogs. 4

5. a) Differentiate the life cycle of *Ascaris suum*, *Toxocara canis* and *Parascaris equorum*? 3
   b) Describe the common deleterious effects of 'ascariasis' in animals? 4

6. a) Distinguish the life cycle pattern among *Haemonchus* spp, *Ostertagia* spp and *Trichostrongylus* spp. within the final host. 3
   b) Illustrate the life cycle and pathogenic significance of 'Medina worms" 4

SECTION-B

7. a) Differentiate the life cycle of *Dictyocaulus arnfieldi*, *Metastrongylus apri* and *Crenosoma vulpis*. 3
   b) Sketch the pathogenesis of 'lungworm' infection in cattle. 4

8. a) How will you confirm the following parasitic infections in a clinical parasitology laboratory? 0.6×5 ~~0.5×6~~=3
   i. *Capillaria annulatus* *ii. Strongyloides ransomni* iii. *Dirofilaria immitis*
   iv. *Enterobious vermicularis* v*i. Toxocara vitulorum*
   b) Write down the scientific name/causal agent against their common name/condition. 0.5×8= 4
   i). Pimply gut (cattle) ii). Kidney-worm (pig) iii). Summer bleeding (horse)
   iv). Hookworm (cattle) v). Eyeworm (chicken) vi). River blindness (man)
   vii). Whipworm (dog) viii). Thorny-headed worm (pig)

9. a) What is PGE? List the parasites which cause PGE in ruminants. 1+2=3
   b) Sketch the pathogenesis significance of 'barber's pole worm' in sheep. 4

10. a) List six (6) nematodes of zoonotic significance. 3
    b) Briefly describe the risk factors and life cycle of 'muscle worm disease'. 4

11. a) Define and enlist five (5) neglected tropical diseases. 3
    b) Write down the life cycle and pathogenesis of 'bovine onchocercosis' 4

12. Write short notes on any two (2) of the following. 3.5x2=7
    i) Visceral larva migrans ii) Humpsore in cattle
    iii) Peri-parturient rise iv) Gastric Habronemiasis in horse

Chattogram Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination-2023
Course Title: Poultry Production (Theory)
Course Code: PPR-202(T)
Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any **THREE** (3) questions from each section where question number **1(one)** and **5 (five)** are compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

1.	**a)**	Define: Poultry, game bird, hybrid vigor and ratites.	**3**
	b)	Enlist poultry species and ten renowned poultry farms in Bangladesh.	**3**
	c)	State the problems and prospects of rearing poultry in Bangladesh.	**5**
2.	**a)**	What is class and breed? Differentiate Deshi chicken from Sonali chicken.	**2+3=5.0**
	b)	Mention the positive and negative traits of native chicken.	**3**
	c)	How can biosecurity measures help to prevent disease outbreaks in poultry farms?	**4**
3.	**a)**	'Egg is a super food and complete food'—give your argument.	**3**
	b)	Draw an egg showing different parts with description.	**7**
	c)	Calculate the production cost of one egg per day by chicken, Duck and Quail, respectively.	**2**
4.	**a)**	What is fryer? Give the characteristics of broiler meat.	**1+3=4.0**
	b)	Discuss killing, defeathering, and scalding for live broiler processing.	**8**

SECTION-B

5.	**a)**	What are the different types of lighting in poultry houses and why are they crucial for healthy layer chicken?	**2+3=5.0**
	b)	Give lighting program from day-old to laying in layer house.	**6**
6	**a)**	What are the types of houses in chicken.	**4**
	b)	Why is laying flock monitoring system important?	**5**
	c)	Write space requirement for growing and laying period.	**3**
7.	**a)**	What is dovecote? State the squab producing pigeon breed.	**2+4=6.0**
	b)	State the ejection procedure of pigeon milk or crop milk.	**6**
8.		Write short notes on any four of the following: $4 \times 3 = 12$	**12**
	a)	Broodiness	
	b)	Productive traits of Guineafowl	
	c)	Furnished cage and conventional cage	
	d)	Moulting and forced molting	
	e)	Geese fattening	
	f)	Aseel and Ayam Chemani	
	g)	Pullet and replacement pullet	
	h)	Fowl and water fowl	