

Chittagong Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination-2015
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** questions from each section of which Question no **1 and 5** are compulsory. Use separate answer script for each section.)

Section-A

1. a) What do you mean by Poultry and Poultry Science? 2
b) State the biological classification of chicken and duck. 3
c) Define breed, variety and strain. State the different classes of chicken with their characteristics of two breeds from each class. 6
2. a) What is brooding? Discuss the brooding management of duckling. 4
b) What is stress? Classify stress in birds. How will you manage the heat stress in a broiler farm? 5
c) What is auto-sexing? State the sexing procedure of broiler chick and duckling. 3
3. a) Write down the varieties of pigeon available in Bangladesh. 2
b) "Pigeon farming for profitable squab production is feasible in Bangladesh" - do you agree with this statement? Justify. 4
c) Write down about pair-bond behavior of pigeon. 2
d) Describe breeding and rearing management of duckling. 4
4. Write short notes on (any four) 3X4= 12
 - a) Parthenogenesis in turkey;
 - b) Pre-requisites of duck-cum-fish farming;
 - c) Factors affecting hatchability;
 - d) Lighting in layer farming;
 - e) Induced molting and
 - f) Litter and litter management in poultry farm.

Section-B

- 5 a) Write down the common origin of mallard duck and muscovy, and differentiate between them. 3
b) Write down the unusual characteristics of Muscovy duck, Guinea fowl and pigeon. 5
c) Write down the utilization of grass by the geese. 3
- 6 a) Draw and label the reproductive system of a laying hen. Indicate the contribution of each part in egg production. 4
b) Why is double nest required for breeder pigeon? Is pigeon hatchery possible in poultry sector? Give your opinion. 4
c) Discuss the factors affecting egg quality of chicken. 4
- 7 a) Define housing. Classify different types of poultry houses. State the stocking density of broiler, layer, duck, quail and pigeon. 4
b) A farmer came to you and claims that hens produce soft-shelled eggs and also peck on each other. State the possible causes and provide the managerial solutions. 5
c) How will you prevent duck plague and duck cholera in a commercial duck farm. 3
- 8 a) Why is mGuinea fowl called 'worst mother'? How will you differentiate jack and jenny? 3
b) What are the main constraints of geese production in Bangladesh? Explain briefly. 3
c) Classify the breeds of geese on the basis of body weight and state the fattening process of geese. 6

Chittagong Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination, 2015
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** questions from each section of which **Question No. 5** is compulsory. Use separate answer script for each section)

Section-A

1. a) Define Clinical Pharmacology. 1.0
b) Which of the following statement concerning drug receptor is more appropriate: 2.0
 (i) Drugs can not act unless they are first bound to a receptor.
 (ii) A drug can act as an antagonist even if it is bound to a drug receptor.
c) What do you mean by "Biotransformation" of a drug? Do comparative discussion between phase-I and phase-II reactions. 3.0
2. a) What is digestive stimulant? "Ginger, a good volatile compound is useful for expulsion of gases from the Livestock"- How? Explain the statement. 2.0
b) Differentiate astringents from protectants. 2.0
c) Vomiting arising from parvo viral infection in a spitz may be reduced by using ondansetron. Write down the mechanism of action with dose of ondansetron. 2.0
3. a) Define and classify diuretics with examples. 2.0
b) Name five diuretics with doses. Describe the mode of action of hexamine. 2.0
c) List the common urinary acidifiers used in veterinary practices and mention their uses. 2.0
4. a) What do you mean by NSAID's? Classify NSAID's with examples. 2.0
b) Describe the characteristics of an ideal anaesthetic. 2.0
c) Sketch the mechanism of fever and pain. 2.0

Section-B

5. a) Write down the different sources of drugs. What are the routes of administration of drug? 1.0
b) Describe the advantages of oral and intravenous administration of drugs. 2.0
c) Define and classify expectorants. 2.0
6. a) Schematically depict the whole pharmacological process of a drug. 1.0
b) A 3 years old cow facing difficulty in defecation for last 3 days. There was also straining during defecation and strings of blood on those scan feces. What is your tentative diagnosis and make an extemporaneous prescription for the case? 3.0
c) "Aloes is an indirect irritant cathartics"- How? Clarify the statement. 2.0
7. a) What are autacoids? Classify autacoids. 2.0
b) Describe the biodegradation of histamine. 2.0
c) Name the histamine receptors with their locations. Describe in brief the H₁ receptor antagonists. 2.0
8. Write short notes on **any three** of the followings: 3×2=6.0
 (a) Drug antagonism (b) Remote local action of drug
 (c) Xanthene derivatives (d) Hematinics

Chittagong Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination 2015
Course Title: Poultry Nutrition and Feed Milling Technology (Theory)
Course Code: PNT- 202 (T)
Full Marks: 70; Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any **three** questions from each section of which **Question No. 1 and 5** are compulsory. Use separate answer script for each section)

Section-A

1. a) How does poultry nutrition substantially differ from ruminant nutrition? Justify your arguments with example. 6.0
b) Differentiate conventional and unconventional poultry feeds. Briefly discuss the importance of unconventional feeds for small scale poultry farms. 5.0
2. a) Define essential, semi-essential, critical and limiting amino acids with examples. Briefly discuss different types of relationships among amino acids. 6.0
b) Differentiate animal proteins from plant proteins. Briefly discuss the importance of calorie-protein ratio in poultry. 6.0
3. a) Briefly discuss the macro and micro nutrient requirements for broiler finisher, layer grower and quail starter in a tabular form. How do requirements of parent stock differ from commercial stock? 6.0
b) Briefly discuss the factors that inherently regulate the nutrient requirements of poultry. 6.0
4. b) Define mycotoxins. Briefly discuss the effects of mycotoxins on health and production of commercial poultry. 6.0
c) Briefly discuss the control measures of mycotoxins available in tropical countries. 6.0

Section-B

5. a) What is feed additive? How does it differ from feed supplement? Briefly discuss different types of feed additives with their mode of actions. 6.0
b) Briefly discuss the physical, chemical and biological methods of poultry feed evaluation in a chronological manner. 5.0
6. a) Briefly discuss the basic steps for manufacture of pellet feed in a commercial feed mill. 6.0
b) List the handling and conveying equipments used in a commercial feed mill. Compare and contrast roller mill with hammer mill and horizontal mixer with vertical mixers. 6.0
7. a) Classify poultry feeds. Discuss the general guidelines for storage and preservation of poultry feed under tropical perspective. 6.0
b) How should you prevent damage of cereal grains, protein supplements, fats, oils and mixed feeds from spoilage? 6.0
8. Write short notes on any four of the following: 3x4=12.0
 - a) Cage layer fatigue
 - b) Animal protein factor
 - c) Skip-a-day feeding
 - d) Pellet die and roller shelf life
 - e) Ca-P-Vitamin D and Vitamin E-Selenium interrelationship

Chittagong Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination, 2015
Course Title: General Pathology-II & Nutritional Pathology (Theory)
Course Code: GNP- 202 (I)
Full Marks: 35; Time: 2 Hours

(Figures in the right margin indicate full marks. Answer any **three** questions from each section where **Question No. 5** is compulsory. Use separate answer script for each section)

Section-A

1. a) Describe in brief different types of emboli with example in each case. 3.0
b) How will you differentiate currant jelly clot from antemortem clot grossly and microscopically? 3.0
2. a) What do you mean by hypersensitivity? Classify hypersensitivity in a tabular form with involvement of immunoglobulin and an example of each case of hypersensitivity. 3.0
b) What do you mean by humoral and cell mediated immunity? 2.0
c) Write down the name of five immunodeficiency diseases. 1.0
3. a) Differentiate between exudates and transudate. 3.0
b) Differentiate hyperemia and congestion grossly and microscopically. 3.0
4. a) Briefly describe the pathogenesis of ketosis in ruminants. 4.0
b) Differentiate rickets from osteodystrophy. 2.0

Section-B

5. a) Enlist the changes found in blood vessels and blood stream during vascular events in inflammation. 2.0
b) Write down the microscopic lesions of fibrinous and granulomatous inflammation. 3.0
6. a) Describe the process of healing by scar tissue formation in sketch form. 2.0
b) How do histamine, serotonin and prostaglandins play role in inflammation? 2.0
c) Write down the name of the inflammations found in following diseases: 2.0
(i) Black leg, (ii) TB, (iii) Calf diphtheria, and
(iv) Abscess.
7. a) In which disease immunity is produced against own nucleic acids? Write down its pathogenesis. 4.0
b) How a granuloma is formed in case of granulomatous inflammation? 2.0
8. a) Briefly describe the pathogenesis of milk fever. 4.0
b) Enlist the disease conditions produced in animals and birds due to deficiency of vitamin A, D, E, B₁, and B₂. 2.0

Chittagong Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination-2015
Course Title: Systemic Bacteriology & Mycology
Course Code: SBM- 202 (T)
Full Marks: 70; Time: 3 Hours

(Answer **Three** questions from each section of which question no **1 & 5** are **compulsory**. Use separate answer scripts for each section. Split answer is discouraged.)

Section-A

1. a) What is the Public Health significance of anthrax? 2
b) What are the measures you should take for control and prevention of Anthrax outbreak? 4
c) What is McFadyean reaction? Describe the major virulence factors of *Bacillus anthracis*. 5
2. a) Mention the pathogenic Clostridia species of Veterinary importance. 4
b) Write down the features of neurotoxin of *Clostridium botulinum*. How does the tetanospasmin work? 6
c) Write down the toxin produced by *Clostridium tetani*. 2
3. a) Make a list of the important diseases produced by Salmonella in poultry. 3
b) Write down the cultural characteristics of *Salmonella pullorum* and *E coli*. 5
c) Write down the name of organism responsible for fowl cholera in poultry. Outline the procedure employed for the isolation and identification of this organism. 4
4. a) Write down the name of organism responsible for causing brooder pneumonia and infectious coryza. 2
b) Briefly describe the diagnostic procedures of brooder pneumonia in poultry. 3
c) Mention the common laboratory procedures used in diagnosis of fungal disease 3
d) Define isolates, strain, serotype and biovar. 4

Section-B

5. a) Write down the principal characteristic of *Corynebacterium renale* and *Erysipelothrix rhusiopathiae*. 4
b) Mr X has a dairy cattle farm which consists of 30 crossbred cattle. The pregnant animals in the farm have frequently been experiencing abortion for the last two year. History provided by the farm manager disclosed that pregnant animals expected to calve within 2-3 months were aborting with retain placenta. Aborted animals had no herd records and aborted cows were in the 3rd semester. No investigation for any microbial pathogen involved in this abortion was previously carried out. The farm manager asked you to investigate the problem of abortion in their herd.
-What is your tentative diagnosis and which bacterial pathogen is associated with that disease?
-What specimens would you submit to the laboratory to diagnose the pathogen?
-Describe the laboratory diagnostic procedure to identify the pathogen. 7
6. a) Define dimorphic fungi. List the pathogenic yeasts which are mostly associated with disease in domestic animals. 3
b) Briefly describe the common laboratory procedures used in the identification of fungal infections. 5
c) Write down the colonial morphology and microscopic appearance of *Aspergillus fumigatus*. 4
7. a) Describe the antigenic properties of *E. coli*. 4
b) Give sequence of procedures for the isolation and identification of *E. coli* from a case of Colibacillosis in poultry. 6
c) State the comparative features of Actinomyces and Arcanobacterium. 2
8. a) Write down the principal characteristic of Rickettsiales. 2
b) List the species of genus Ehrlichia along with the cell types which they target. 2
c) What are the fungi responsible for dermaophytes in dog? How will you identify the dermatophytes in laboratory? 8

Chittagong Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination 2015
Course Title: Pet and Small Ruminant Production (Theory)
Course Code: PSR-202 (T)
Full Marks: 35; Time: 2.0 Hours

(Answer any **three** questions from each section of which **Question No. 1 of section A** is compulsory.
Split answer are discouraged)

Section-A

1. a) State the taxonomy of sheep. 1.0
b) Enumerate the common features of sheep husbandry. 2.0
c) List the points those are considered for upgrading the indigenous sheep of Bangladesh. 2.0
2. a) List the suitable dog breeds. 2.0
b) Briefly mention the social relationship of dogs with human. 2.0
c) Shortly describe the feeding habit and nutrient requirements of dog. 2.0
3. a) Write the taxonomy of cat. 2.0
b) Write down the care and management of a sick cat. 4.0
4. Write short notes on **any three** of the following: (3x2=6.0)
(a) Training of dogs.
(b) Prevention and control of common infectious and non-infectious diseases of cats.
(c) Mortality of kids in backyard farming.
(d) Inbreeding in Bengal goat.

Section-B

5. a) Write down the importance of goat in rural development of Bangladesh. 2.0
b) Classify goat breeds in the tropics according to their types. 2.0
c) Write down the nutrient requirements of goat according to their age. 2.0
6. a) State the common features of buck management. 4.0
b) Enumerate the common guidelines for selecting a buck for a particular herd. 2.0
7. a) State the prospect of goat rearing in Bangladesh. 2.0
b) Why are goats concentrated in Asia and Africa? 2.0
c) State the criteria for selecting a breed for genetic improvement of Bengal goat. 2.0
8. a) What do you mean by breeding efficiency? 1.0
b) How breeding efficiency can be measured for a sheep herd? 3.0
c) State the factors that can directly affect the breeding efficiency of a sheep herd. 2.0

Section-B

6. a) Which tests will be performed under the following conditions: 3.0
- (i) To test population variance with a specific value.
 - (ii) To test the independence of attributes
 - (iii) To test the difference among several population means
(homogeneous experimental unit)

b) Write down the procedure to test a population mean with a specific value when sample size is small and population variance is known. 5.0

7. a) Distinguish between correlation and regression. 4.0

b) The following data give the weights (in kg) and ages (in day) of 6 chickens of a poultry farm: 5.0

Weight :	1.2	1.3	1.4	1.25	1.35	1.5
Age :	25	24	21	27	28	32

Fit a linear regression line of weight on age of chickens.

8. a) Identify each of the following variables according to their scale of measurements: 3.0

- i. Variety of fishes: (N)
- ii. Sugar contents (g/100gm) in blackberry pulp: (N)
- iii. Diastolic blood pressure of the employees working in a poultry farm;
- iv. Types of houses for the CVASU teachers (A, B, C, D). (ordinal)

b) The following frequency distribution shows the length of hilsha fish caught on a certain day at a certain point of the padma. 3.0

Class Interval (Length in cm)	No. of fishes caught	Class In (Length in cm)	No. of fishes caught
25-30	29	45-50	10
30-35	35	50-55	5
35-40	42	55-60	2
40-45	52	-	-

Point out the following issues with the help of the above frequency table:

- (i) The frequency density of the modal class;
 - (ii) Mid-value of the penultimate class;
 - (iii) Percentages of fishes having more than 45 cm;
 - (iv) Relative frequency of the median class.
- c) What are the shape characteristics of a distribution? Sketch different types of skewness and kurtosis with the help of diagrams. 3.0

9. a) What is meant by dispersion of a set of data? Indicate its various relative and absolute measures. Which measures do you think the best and why? 5.0

b) The summary data of the weights of chickens of two poultry farms are as follows: 4.0

	Farm A	Farm B
Average weight in kg	1.5	1.5
Standard deviation in kg	0.9	1.05

A person wants to buy 50 chickens for a picnic party having weight around 1.5 kg, from which farm he/she will prefer to buy chickens and why?

10. a) What is sample survey? Discuss the advantages of sample survey over census. Name some sampling techniques known to you. 3.0

b) What is meant by design of experiment? State the basic principles of experimental design? Discuss, in short, any one basic principle. 3.0

c) Define a randomized block design (RBD). What are the advantages over completely randomized design (CRD). Give a layout of RBD. 3.0

Chittagong Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination, 2015
Course Title: Biostatistics (Theory)
Course Code: BST-202 (T)
Full Marks: 70; Time: 3.0 Hours

(Figures in the right margin indicate full marks. Answer any **Four** questions from each section of which question No.1 and 6 are compulsory. Use separate answer script for each section.)

Section-A

1. a) Discrete variables ONLY take on 'isolated values' - do you agree? If not, defend your comment. 3.0
- b) Give an example of a Qualitative and a continuous variable each. Also mention the right scale to measure these two variables. 2.0
- c) If you are given a data set including colour of cows white, black and red, which graphs would you consider to present this data set? 3.0

2. a) Why is standard deviation mostly preferred to variance? Explain. 4.0
- b) Particulars given below relating to the wage distribution of the employees of a poultry farm in a day: mean wage - Tk 75, modal wage - 87 and standard deviation 5.0
(2+2+1)
 Tk 8.
- (i) Find CV and comment? 6/75
- (ii) Calculate a suitable measure of skewness. 9/18
- (iii) Is the distribution symmetrical?

3. a) Define a frequency distribution. Discuss the important steps involved in constructing a frequency distribution from raw data. 4.0
- b) Distinguish between the following terms (any two): 4.0
- (i) Primary data and secondary data;
- (ii) Histogram and bar diagram;
- (iii) Distinguish between descriptive and inferential statistics.

- c) Multiple choice: 1.0
- (i) Data collected from "Bangladesh Agricultural Research Council (BARC)" is an example of-
- (a) Primary data (b) Global data ~~(c) Secondary data~~ (d) None of these
- (ii) Budget allocations in different sectors in a country can be represented graphically by
- (a) pie diagram ~~(b) bar diagram~~ (c) histogram (d) ogive curve

4. a) What do you mean by central tendency? What are the objectives of central tendency? Show that arithmetic mean depends on both shift of origin and change of scale. 4.0

- b) The daily temperature (in degree) in city A for three consecutive months are recorded as follows:

Temperature (in ^o)	No. of days	Temperature (in ^o)	No. of days
28-30	12	37-39	13
31-33	20	40-42	24
34-36	25	43-45	6

Calculate (i) the average temperature and (ii) modal temperature of the city. 5.0

5. a) Name a distribution whose mean > variance. Also mention some of its properties. 4.0
- b) Suppose there are two varieties of feed- mash feed and pellet feed. In a sample of 100 chickens, 75 were given mash feed; 50 were given pellet feed and 40 were given both. A chicken is randomly selected. Find the probability that the selected chicken were given. 5.0

- (i) Mash feed
- ~~(ii) Only mash feed~~
- ~~(iii) At least one feed~~
- ~~(iv) Both the feed~~
- (v) None of the feed

$P(A) = 75$
 $P(B) = 50$
 $P(A \cap B) = 40$

$\frac{1}{75}$

Chittagong Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination-2015
Course Title: Veterinary Nematology (Theory)
Course Code: VNE- 202 (T)
Full Marks: 70; Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any **FIVE** questions from each section. Use separate answer script for each section.)

Section-A

1. a) Draw and label a longitudinal section of a typical male nematode. 3
b) Illustrate with diagram the different types of esophagus of nematode parasites. 4
2. a) List the definitive hosts with the predilection sites of any three of the following 3 nematodes.
i) *Toxocara vitulorum*, ii) *Heterakis gallinarum*,
iii) *Oesophagostomum radiatum*, and iv) *Syngamus trachea*.
b) Compare the morphological features between Ascaridia and Strongyloidea. 4
3. Describe the pathologic significance of the followings: 7
(a) Anchylostomiasis in dogs, and
(b) Lung worm infestation in calves.
4. a) Sketch the life cycle of canine ascarid worms. 3
b) How verminous aneurysm and verminous colic are produced in horse? 4
5. a) Describe the life cycle and pathologic significance of canine heart worm infection. 4
b) Explain the pathologic effect of *Spirocerca lupi* infection in dog. 3
6. a) Describe the life cycle of *Trichinella spiralis*. 3
b) Enlist eight nematodes causing diarrhoea and/or anaemia in animals. 4

Section-B

7. a) Name six bursate and six non-bursate nematodes. 3
b) How will you differentiate between type-I and type-II ostertagiasis? 4
8. a) Name the parasitic nematodes of ducks with their predilection site in the hosts and their brief significance. 3
b) Write brief notes on:
(i) Hypobiosis, and (ii) Periparturient rise. 4
9. a) Draw and label the cuticular modifications of nematodes. 3
b) What do you mean by following conditions? 4
i) Summer sore, ii) Sweating blood, iii) Humpsore, and iv) Nurse cell.
10. a) Show the nematodes of dogs according to predilection site in a diagram. 4
b) Design the control measures against public health significant nematodes. 3
11. a) Write down the life cycle and pathologic significance of *Haemonchus contortus* infection in a heifer. 4
b) Write down the pathologic significance of kidney worm of pig. 3
12. State the important morphological characteristic of the following nematodes. 7
a) *Trichuris suis*, b) *Syngamus trachea*,
c) *Toxocara vitulorum*, d) *Strongylus vulgaris*,
e) *Stephanofilaria assamensis*, f) *Ascaridia galli*, and
g) *Oesophagostomum radiatum*.