

**Chittagong Veterinary and Animal Sciences University**  
**DVM 2<sup>nd</sup> year 2<sup>nd</sup> Semester Final Examination 2018**  
**Subject: Poultry Nutrition and Feed Milling Technology (Theory)**  
**Course Title: PNT-202 (T)**  
**Full Marks: 70, Time: 3 Hours**

(Figures in the right margin indicate full marks. Answer Six (6) questions from each section, where question No. 1 & 5 are compulsory. Use separate answer script for each section. Fractions of the questions must be answered together)

**SECTION-A**

1. a) Define essential, limiting and critical amino acids with example. List the essential amino acids for different species of poultry. 3.0  
 b) What is phase feeding? Justify the needs for manipulating requirements of laying birds in different phases of feeding. 4.0  
 c) What is available phosphorus? What strategy should you apply to enhance the bio-availability of organic phosphorus in poultry? 4.0
2. a) Write down the functions, deficiency symptoms of fat soluble vitamins. 6.0  
 b) What are the causes of cage layer fatigue? 3.0  
 c) What is the interrelationship between Se and Vitamin-E? 3.0
3. a) Mention the nutritional requirements of layer starter, grower, layer and broiler breeder ration. 6.0  
 b) Describe about the procedure of computer based ration formulation for broiler finisher. 6.0
4. Write short notes (any three): 3x4=12  
 i) Calorie- protein ratio.  
 ii) Supplementation of phytase enzyme in broiler ration.  
~~iii~~ Feeding standard.  
 iv) Limiting and critical amino acid for laying hen.

**SECTION-B**

5. a) A senior CVASU pathologist was surprised to see excess deposition of hepatic and cardiac fat in Hybro broiler at 3<sup>rd</sup> week. What feeding strategy could be adopted to resolve this problem? 3.0  
 b) How do emulsifiers exhibit hydrophilic and lipophilic behaviour in the same time? Do you think use of emulsifier is a must in broiler finisher diet? 4.0  
 c) Do you think acidifiers are substitute for antibiotics? How organic acids and acidifiers are utilized in avian system? 4.0
6. a) How probiotics inhibit colonization of pathogenic microorganisms in poultry caeca? When should you incorporate prebiotic and probiotic in poultry diet? 6.0  
 b) Discuss the physical, chemical and biological procedures for evaluation of poultry feeds. 6.0
7. a) Briefly discuss the guidelines for feeding replacement pullet of Hisex Brown strain. 4.0  
 b) Why protein levels are gradually decreased and energy levels are increased in broiler ration? 4.0  
 c) How should you minimize wastage and feed costs in broiler production? 4.0
8. a) How mycotoxins affect performance, health and immune systems of poultry? Do they affect human health also? 6.0  
 b) How should you ameliorate adverse effects of mycotoxins in tropical countries? 6.0

**Chittagong Veterinary and Animal Sciences University**  
**DVM 2<sup>nd</sup> year 2<sup>nd</sup> Semester Final Examination 2018**  
**Subject: General Pathology-II and Nutritional Pathology (Theory)**  
**Course Title: 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 no. 1 is compulsory. Use separate answer script for each section)

### SECTION-A

- |    |   |   |
|----|---|---|
| 1. | a) Define inflammation. Describe the role any two of cell-associated mediators of inflammation.   | 3 |
|    | b) List the conditions develop due to deficiency of water soluble and fat soluble vitamins in chicken.  | 2 |
| 2. | a) Name different types of shock. Describe the pathogenesis of septic shock.  | 2 |
|    | b) Name three metabolic diseases. Write down the predisposing factors and mechanism of milk fever in cattle.  | 4 |
| 3. | a) A goat was diagnosed with edema in the sub-mandibular region. Mention the possible causes and mechanism of this type of edema.   | 4 |
|    | b) Name and interpret the cardinal signs of inflammation.   | 2 |
| 4. | a) Write down the gross and microscopic lesions of following inflammations:<br>(i) Purulent inflammation<br>(ii) Granulomatous inflammation<br>(iii) Hemorrhagic inflammation | 4 |
|    | b) Describe the types and causes of haemorrhage.  | 2 |

### SECTION-B

- |    |  |   |
|----|--|---|
| 5. | a) Enlist five autoimmune diseases. Describe the mechanism of that autoimmune disease where there is formed immunity against nucleic acids and nucleoproteins. | 5 |
|    | b) Name five immunodeficiency diseases.  | 1 |
| 6. | a) Define and classify thrombus. Which thrombus may produce thromboemboli?   | 3 |
|    | b) How you will differentiate anti-mortem clot from post-mortem clot?  | 2 |
|    | c) Enlist the causes of failure to clot.   | 1 |
| 7. | a) Write down the pathogenesis of white muscle disease in a calf.  | 4 |
|    | b) Write down the gross and microscopic lesions of equine rhabdomyolysis.  | 2 |
| 8. | a) Define and classify hypersensitivity. Describe the process of allergy and anaphylaxis.  | 4 |
|    | b) Sketch the process of serum sickness.   | 2 |

**Chittagong Veterinary and Animal Sciences University**

**DVM 2<sup>nd</sup> year 2<sup>nd</sup> Semester Final Examination 2018**

**Subject: Systemic Bacteriology & Mycology (Theory)**

**Course Title: SBM-202 (T)**

**Full Marks: 70, Time: 3 Hours**

(Figures in the right margin indicate full marks. Answer Six (6) questions from each section, where question No. 1 & 5 are compulsory. Use separate answer script for each section. Fractions of the questions must be answered together)

**SECTION-A**

1. a) List the major gram positive organism with the diseases they cause in cattle and poultry. 4  
b) Outline the procedure for the isolation and identification of *Staphylococcus pseudintermedius* from a case of pyoderma in a dog. 4  
c) Describe the morphological and cultural properties of *Aspergillus fumigatus* 3
2. a) Define bacteria. Describe the criteria for classifying bacteria. 5  
b) Discuss the growth and virulence factors for bacteria that shows McFadyean reaction 4  
c) Define following terms: 3  
i) Serovar ii Biotype iii) Pathotype iv) strain v) Isolate vi) Species
3. a) Describe the extracellular products of *Staphylococcus aureus* 5  
b) Illustrate the grouping of Streptococci based on C substance 3  
c) List coagulase positive Staphylococci with their clinical importance in ruminants and pets 4
4. i) List extracellular products of Streptococci with their functions 5  
ii) Mention the principal disease conditions caused by *Clostridium perfringens*. Explain Nagler reaction. 3+1=4  
iii) Explain following term with causal agents 3  
Diamond skin disease ii) Lumpy jaw iii) Wool's sorter' disease iv) Pulpy kidney disease v) Limberneck vi) Lockjaw

**SECTION-B**

5. a) Define mycotoxin and mycotoxicosis. Present the summary of the important characteristics of mycotoxins. 2+3  
b) How can you differentiate *Bacillus anthracis* from *Bacillus cereus*? 2  
c) Give the microscopic morphology of the dimorphic fungi in animal tissue and in culture at 25°C and at 37°C 4
6. a) Compare the feature of neurotoxins produced by *Clostridium tetani* and *Clostridium botulinum* 4  
b) Name the suitable specimens required from various clinical conditions for the detection of *Listeria monocytogenes* and *Campylobacter jejuni* 2  
c) Write down the toxins produced by *Clostridium perfringens* types A to E their biological activities and associated disease 6
7. a) How can a case of acute colisepticemia in a chick be diagnosed in laboratory? 4  
b) Explain X and V factors that are required in media of isolation of *Hemophilus* species. How can you screen a cattle herd for brucellosis? 2+2  
c) Illustrate the laboratory approaches for the diagnosis of Leptospirosis in animals 4
8. a) State the general features of *Corynebacterium renale*, *Pseudomonas aeruginosa* and *Moraxella* 3  
b) Along with examples categorize dermatophyte based on habitat or host preference 2  
c) How can a case of dermatophytosis in a dog be diagnosed in laboratory? 7

**Chittagong Veterinary and Animal Sciences University**  
**DVM 2<sup>nd</sup> year 2<sup>nd</sup> Semester Final Examination 2018**  
**Subject: Poultry Nutrition and Feed Milling Technology (Theory)**  
**Course Title: PNT-202 (T)**  
**Full Marks: 70, Time: 3 Hours**

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  - i) Calorie- protein ratio.
  - ii) Supplementation of phytase enzyme in broiler ration.
  - iii) Feeding standard.
  - iv) Limiting and critical amino acid for laying hen.

**SECTION-B**

5. a) A senior CVASU pathologist was surprised to see excess deposition of hepatic and cardiac fat in Hybro broiler at 3<sup>rd</sup> week. What feeding strategy could be adopted to resolve this problem? 3.0  
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**Chittagong Veterinary and Animal Sciences University**

**DVM 2<sup>nd</sup> year 2<sup>nd</sup> Semester Final Examination 2018**

**Subject: General Pharmacology (Theory)**

**Course Title: 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 no. 1 is compulsory. Use separate answer script for each section)

**SECTION-A**

1. a) Define bioavailability, plasma half-life, pharmacopeia and drug synergism. 2  
b) Differentiate between 3  
    i) Drug and medicine                      ii) Laxative and purgative  
    iii) Adsorbent and absorbent
2. a) Define and classify intestinal stimulants with examples. 3  
b) Differentiate emetics from anti-emetics. What are the justification of use of emetics and anti-emetics in pet animals? 3
3. a) Define astringent with examples. How astringent works against diarrhoea? 2  
b) Write down the mode of action, dose indication and contraindication of direct irritant purgatives in cattle. 4
4. a) Briefly describe the stage of surgical anaesthesia. 3  
b) Write down the mode of action, dose, indication and contraindication of barbiturate in livestock. 3

**SECTION-B**

5. a) Differentiate expectorants from bronchodilator. Classify antitussive drugs with examples. 3  
b) Write down the mode of action, dose, indication and contraindication of salbutamol in dog. 3
6. a) Classify diuretics with examples. What are the use of urinary alkalizer and acidifier in livestock? 3  
b) Write down the mode of action, dose, indication and contraindication of furosemide diuretics. 3
7. a) Differentiate general anaesthesia from local anaesthesia. Write down the characteristics of an ideal anaesthetics. 3  
b) Write down the mode of action, dose, indication and contraindication of lidocaine in animal. 3
8. Write short notes on (any three): 3x2=6  
    i) Branches of Pharmacology                      ii) Hexamine  
    iii) Ketamine    iv) Receptor mechanism of drug action

**Chittagong Veterinary and Animal Sciences University**

**DVM 2<sup>nd</sup> year 2<sup>nd</sup> Semester Final Examination 2018**

**Subject: Pet and Small Ruminant Production (Theory)**

**Course Title: PSR-202 (T)**

**Full Marks: 35, Time: 2 Hours**

(Figures in the right margin indicate full marks. Answer **Three (3)** questions from each section, where question No. 1 is compulsory. Use separate answer script for each section. Fractions of the questions must be answered together)

**SECTION-A**

1. a) List 5 (Five) goat breeds suitable for Bangladesh. 1  
b) State the DM, ME and CP requirements of goat. 2  
c) Briefly describe prospects of goat farming in Bangladesh. 2
2. a) Write down the taxonomy of sheep. 1  
b) Briefly describe origin, distribution, productive and reproductive characteristics of indigenous sheep. 2  
c) Describe management practices of sheep. 3
3. a) State the feeding systems of cats and dogs. 3  
b) Briefly describe housing system of cats and dogs. 3
4. Write short notes (any three): 3x2=6  
a) Care and management of sick cat.  
b) Common infectious and non-infectious diseases of cat.  
c) Housing of goat.  
d) Breeding efficiency of a sheep herd.

**SECTION-B**

5. a) Define the terms Pet and Ruminant. 1  
b) Prepare 10 kg starter for a 3 months old kid. 2  
c) "Goat possesses peculiar feeding characteristics"- Justify. 3
6. a) How will you select and prepare an ewe for breeding purpose? 3  
b) Briefly describe the management of ewe at different stages. 3
7. a) Classify dog breeds with examples. 1  
b) What are the common commands used in dog training? 2  
c) How will you train and control the aggressive behaviour of your dog? 3
8. Write short notes (any three): 3x 2=6  
a) Cat feeding and management.  
b) Rabies in Goat.  
c) Integrated feeding system.  
d) Social relation of dogs and cats with human.

**Chittagong Veterinary and Animal Sciences University**

**DVM 2<sup>nd</sup> year 2<sup>nd</sup> Semester Final Examination 2018**

**Subject: Biostatistics (Theory)**

**Course Title: 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 no. **3 and 10** are compulsory. Use separate answer script for each section)

**SECTION-A**

1. a) Define Biostatistics. Mention the functions and limitations of Statistics. 6  
 (b) Identify the scale of measurement: 3
  - i) BCS score
  - ii) Temperature of poultry farm
  - iii) Weight of Faiyumi bird
  - iv) Hospital stay of a patient
  - v) Class roll no.
  - vi) Holding no. of a house
2. a) Briefly discuss the different frequency curve with example. 5  
 b) Differentiate between: 4
  - i) Discrete and Continuous variable
  - ii) Histogram and Bardigram.
3. a) What do you mean by dispersion? Mention it's all measures. 4  
 b) Calculate standard deviation (SD) and coefficient of variation (CV) of population consists of 4 selling prices of egg of Turkey (in Taka): 50, 40, 45, and 48. 4
4. a) Describe the standardized variable. Show that the mean and variance of standardized variable are zero and one respectively. Suppose that random samples of 5 cows' haemoglobin concentration (gm/dl) are 8,12,15,18 and 30. Identify whether the value of 30 is outlier or not in this series. 6  
 b) Explain the moments and its uses 3
5. a) State the additive and multiplicative law of probability. Prove that the probability range is between 0 and 1. 6  
 b) Define independent event, conditional event and joint probability function. 3

**SECTION-B**

6. a) Summarize the Binomial distribution, Poisson distribution and normal distribution. 6  
 b) A total of 100 cows from five farms were randomly selected for mastitis with test results in the table below. Calculate sensitivity and specificity of diagnostic test. 3

	Having mastitis	Not having mastitis
Test (+)	25	25
Test (-)	15	35
7. a) Classify the perfect positive and perfect negative correlation. Give the outline of the test of significance of an observed correlation coefficient. 6  
 b) Compare between Pearson correlation and Spearman rank correlation. 3
8. a) Prepare a diagrammatic presentation of mean and variance test of significance (Test name, hypothesis, test statistic and decision). 6  
 b) Illustrate the properties of a good estimator. 3
9. a) Write the basic principles of experimental design? Explain treatment, experimental unit and ANOVA table. 6  
 b) Point out the methods of sampling and give a practical example of simple random sampling. 3
10. Answer the following questions:
  - i) Which is the example of an attribute? a) Age    b) Weight    c) Gender 1x8=8
  - ii) For any non-negative and non-zero positive values, which is correct?
    - a)  $G.M = \sqrt{A.M \times H.M}$
    - b)  $A.M = \sqrt{G.M \times H.M}$
    - c)  $H.M = \sqrt{A.M \times G.M}$
  - iii) For a Poisson distribution, which result is correct?
    - a) Mean > variance
    - b) Mean < variance
    - c) Mean = variance
  - iv) For a distribution, if mean = median = mode, then it is called:
    - a) Positively skewed
    - b) Negatively skewed
    - c) Symmetrical
  - v) The shape of normal distribution is-
    - a) Ring shaped
    - b) Bell shaped
    - c) Rectangular
  - vi) Which is correct?
    - a)  $r > 1$ ;
    - b)  $P(A) = -0.5$
    - c)  $r = 0$
  - vii) Find the mean and S.D from the first five natural numbers.
  - viii) In which graph can we locate mode? Histogram

**Chittagong Veterinary and Animal Sciences University**

**DVM 2<sup>nd</sup> year 2<sup>nd</sup> Semester Final Examination 2018**

**Subject: Poultry Production (Theory)**

**Course Title: PPR-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 no. **1 and 5** are compulsory. Use separate answer script for each section. Fractions of the questions must be answered together)

**SECTION-A**

1. a) Define Poultry and Poultry Science. 2  
b) Describe briefly the prospects and problems of broiler and layer production in Bangladesh. 6  
c) Discuss the characteristics of chicken breeds (White Leghorn and Plymouth Rock) in a nutshell. 3
2. a) What is photoperiod and light intensity?. 2  
b) Explain the lighting schedule for layer strain (ISA-white). 5  
c) Suppose the area of a layer house is 7000 sq. ft and 2 foot candle (fc) is required for illuminate the house, calculate the no. of incandescent bulb require for this house 5
3. a) Briefly discuss the advantage and disadvantages of duck farming in Bangladesh. 6  
b) Classify breeds of duck on the basis of utility with examples. 3  
c) State the production characteristics of two egg producing breeds of duck. 3
4. Distinguish between: 6×2=12  
a) Varsity and strain.  
b) Pullet and hen.  
c) Clutch and pause.  
d) Brooding and rearing.  
e) Capon and breeder male.  
f) Parent stock and commercial stock.

**SECTION-B**

5. a) What is litter and nesting materials. ? 1  
b) State the properties, problems and recycling processes of litter materials. 5  
c) Discuss the poultry behaviour and welfare system. 5
6. a) What is broiler & meat chickens? 1  
b) Sketch the lay-out of poultry processing plant. 4  
c) Discuss the main steps of broiler processing. 5  
d) 'Breast meat is the best meat'---Explain. 2
7. a) What is poultry feeding? Discuss the different feeding systems of poultry with its merits and demerits. 6  
b) Write short notes on (any two): 3×2=6  
i) Litter and litter management in poultry farm.  
ii) Factors affecting egg production  
iii) Fattening of geese.
8. Write short note (Any six): 6×2=12  
a) Male duck  
b) Animal crop  
c) Lean meat  
d) Egg shell mechanism  
e) Egg Quality  
f) Watch dog  
g) Run  
h) Toulouse  
i) Swan  
j) Local duck



**Chittagong Veterinary and Animal Sciences University**

**DVM 2<sup>nd</sup> year 2<sup>nd</sup> Semester Final Examination 2018**

**Subject: Veterinary Nematology (Theory)**

**Course Title: VNM-202 (T)**

**Full Marks: 70, Time: 3 Hours**

(Figures in the right margin indicate full marks. Answer Five (5) questions from each section.  
Use separate answer script for each section. Fractions of the questions must be answered together)

**SECTION-A**

1. a) Draw and label a cross section of a nematode. 2  
b) Describe the cuticular modifications of nematodes. 5
2. a) What is PGE? Enlist the parasites which causes PGE in ruminants. 3  
b) Describe the morphology and life cycle of *Haemonchus contortus*. 4
3. a) Describe the pathogenesis of verminous pneumonia in cow. 3  
b) Write notes on peri-parturient rise and hypobiosis. 4
4. a) Elaborate the epidemiology, morphology and clinical signs of gapeworm. 3  
b) Design a control strategy against filaroids. 4
5. a) Enlist the species with their location in final hosts and available vectors that cause onchocercosis in cattle and horse. 3  
b) Sketch the life cycle and pathogenic significance of equine onchocercosis. 4
6. a) Sketch the life cycle of *Toxocara canis*. 3  
b) Write a note on "milk spot" and "visceral larval migrans". 4

**SECTION-B**

7. a) What is roundworm? Briefly mention the common morphological characteristics of a roundworm. 3  
b) Enlist the possible mode of transmission of nematodes with examples. 4
8. a) What is spiny-headed worm? How do you differentiate them with nematodes. 3  
b) Write down the epidemiology and public health significance of trichinosis. 4
9. a) Write down the life cycle differences among *Strongylus vulgaris*, *S. edentatus* and *S. equinus*. 5  
b) Describe the pathogenic significance of large redworm infection in horse. 2
10. a) Mention the risk factors associated with stephanofilariasis and ascariasis in cattle. 4  
b) How do you morphologically identify the following parasites in the laboratory? 0.5x6=03  
i) *Haemonchus placei* ii) *Strongylus vulgaris*  
iii) *Heterakis gallinarum* iv) *Ascaridia columbae*  
v) *Ancylostoma caninum* vi) *Trichuris vulpis*
11. a) How will you diagnose the following parasitic infections in the laboratory? 0.5x6=03  
i) Trichuriasis ii) Enterobiasis  
iii) Ascariasis in bird iv) *Toxocara canis*  
v) Capillariasis vi) Syngamiasis  
b) Write down the scientific name/causal agent against their common name/condition: 0.5x8=4  
i) Dog hookworm ii) River blindness  
iii) Jack sore iv) Cattle nodular worm  
v) Summer bleeding vi) Dragon worm  
vii) Giant kidney worm viii) Elephantiasis
12. Write short note on any two of the following diseases / conditions: 3.5x2=7  
a) Pig kidneyworm b) Spirocercosis c) Chabertiosis in goat

**Chittagong Veterinary and Animal Sciences University**  
**DVM 2<sup>nd</sup> Year 2<sup>nd</sup> 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*.