

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination, 2014
Course Title: Poultry Production (Layer & Broiler) (Theory)
Course Code: PPR -301
Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any 3 (Three) questions from each section of which question No. 1 & 5 are compulsory. Use separate answer scripts for each section.)

Section-A

1. a. State the zoological classification of chicken's. 2
- b. Write down the importance of poultry and poultry industry with special context to Bangladesh. 3
- c. Write the common characteristics of different economic classes of poultry with examples. 3
- d. Define strain, variety, roaster, clutch, down, ornithology. 3

2. a. State the factors affecting successful broiler production. 3
- b. What is FCR? Calculate the FCR of a lying flock (n=120) for the period of peak production only assuming related factors. 4
- c. Sketch the broiler processing steps in a flow diagram and briefly describe the important steps. 5

3. a. What are the criteria of selecting hatching eggs? 2
- b. State the requirements of successful incubation in a modern hatchery. 3
- c. How would you collect, store, and maintain hatching eggs in the tropical climate? 3
- d. What is hatchability? Briefly discuss the factors that affect fertility of chickens' eggs. 4

4. Write short notes (Any four) 4×3 =12
 - a. Hygienic and sanitary measures in a hatchery
 - b. Table eggs and hatching eggs
 - c. Free ranging vs. scavenging
 - d. Heat stress in a poultry flock
 - e. Moulting

Section-B

5. a. Mention the distinguishing points between good layer and poor layer. 3
- b. Write the name of different hormones involved in the egg production with their functions. 3
- c. Mention the lighting schedule for a laying flock. 2
- d. Shortly discuss the factors affecting good quality egg production in a commercial farm. 3

6. a. State the basic qualities of a chicken to be considered for selecting as a breeding stock. 3
- b. Define incubator and incubation. Briefly discuss the principles of artificial incubation. 5
- c. State in shortly the embryonic development in last seven days of incubation period. 4

7. a. What is the uniformity in a laying flock? State the importance of uniformity in a laying flock. 5
- b. What do you mean by stocking density? What should be the stocking density in broiler flock at marketing age? 2
- c. What is shrinkage? What is it's importance in controlling broiler quality during processing? 5

8. Write short notes (Any four) 4×3 =12
 - a. Preparation of a brooding house
 - b. Vaccination schedule in a layer flock
 - c. Litter and litter management
 - d. ~~Parent stock and commercial stock~~
 - e. Bangladesh Poultry Model

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination-2014
Course Title: Animal Nutrition (Theory)
Course Code: ANT - 301
Full Marks: 55, Time: 3 Hours



(Figures in the right margin indicate full marks. Answer any **three (3)** questions from each section where question **number 5** is compulsory. Use separate answer scripts for each section.)

Section-A

1. a. Classify lipids with example. Differentiate lipid, fat and oil indicating specific example. 3
 b. Discuss the function of cholesterol and phospholipids in animal body. Write down the structure of lecithin and cephalin. 3
 c. Write down the properties of fat. 3

2. a. Define carbohydrate. Briefly discuss the function of glucuronic acid, hyaluronic acid and chondroitin sulphate in animal body. 3
 b. Define feed, forage and nutrition. How nutrition differs from digestion? 3
 c. Mention the name of polysaccharides found in animals and plants. 3

3. a. Define vitamin and mineral. Compare and contrast water soluble and fat soluble vitamins from the stand points of ruminant nutrition. 3
 b. Briefly discuss the interrelationship among Ca, P and vitamin D. 3
 c. What are the importances of common salt in animal feeding? 3

4. Write short notes on (any three) 3x3 9
 a. Feeding standard of dairy cattle
 b. Electron transport chain
 c. Hexose monophosphate shunt
 d. Partitioning of energy

Section-B


5. a. What is digestibility? How apparent digestibility differs from true digestibility? 3
 b. Sequentially discuss the steps for conducting a conventional digestibility trial using Friesian steers. 4
 c. Discuss the factors affecting the digestibility co-efficient. 3

6. a. Define Crude Protein (CP), Rumen Degradable Protein (RDP), Rumen Undegradable Protein (UDP) and Available Protein (AP). 3
 b. Discuss the specific role of RDP and UDP in high yielding dairy cow. Between RDP and UDP, which one is especially inevitable for high yielding lactating cows? 3
 c. Briefly discuss the sequential steps of microbial body protein formation in growing steers. 3

7. a. Criticize rice straw as a sole source of basal diet for ruminants. 3
 b. Is carbohydrate dietary essential for ruminants? What will happen if excess amount readily available carbohydrate is supplemented in ruminant diet? 3
 c. Discuss the significance of gluconeogenesis for the synthesis of milk sugar? 3

8. a. How trans-fatty acids are formed in the rumen? Discuss the dietary plans when they are carcinogenic and when beneficial? 3
 b. Critically discuss the inherent mechanism of emulsification and micelle formation in perspective of lipid digestion and absorption in ruminants. 3
 c. Discuss the impact of gradually increasing forage: concentrate ratio on physiology of ruminant stomach. 3

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Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination-2014
Course Title: Virology (Theory)
Course Code: VIR-301
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 scripts for each section.)

Section-A

1. a. Define virus. Distinguish the property of virus from other microorganisms. 2
b. Describe the components of a typical virus with their function. 5
2. a. State the virus versus cell interaction. 5
b. What is viremia? Differentiate primary viremia from secondary viremia. 2
3. a. Describe the contribution of internationally acclaimed five (5) scientists in the field of virology. 4
b. Express the thoughts of the origin of virus. 3
4. a. State the centrifugation process in relation to virus purification. 3
b. Outline the different process of virus inactivation. 4
5. a. Illustrate the modern virus classification with suitable example. 3
b. What do you mean by virus replication? Mention the steps of virus replication. 1
c. State the attachment and exit mechanism of virus from the cell. 3
6. a. Write down the properties of mycoplasma and chlamydochila. 4
b. What is prion? How does it cause disease in animals? 3

Section-B

7. a. Mention the OIE criteria of HPAIV. 3
b. How many segments are present in avian influenza virus? Indicate the role of 7th and 8th segment of AIV. 4
8. Distinguish the following viruses: Avian Influenza Virus versus Newcastle Disease Virus; Lymphoid leukosis virus versus Marek's disease virus; fixed rabies virus versus street rabies virus. 7
9. List the viruses of chicken and duck with its family, symmetry, sense, DNA/RNA, enveloped/naked, replicate site in the cell in a tabular form. 7
10. a. What are the different strains of Newcastle disease? 2
b. How can you characterize an isolated Newcastle disease virus? 5
11. a. Outline the structures of infectious bursal disease virus with mentioning the role of different capsid protein. 3
b. Analyze the vaccination failure in case of IBDV. 4
12. a. What type of samples will you collect for diagnosis of i) FMDV ii) Rabies iii) PPR iv) Avian Influenza virus 3
b. List the lesions are found in embryo after following virus inoculation 4
i) Avian encephalomyelitis virus
ii) Duck Plague virus
iii) Infectious bronchitis virus
iv) Fowl pox virus

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination-2014
Course Title: Systemic and Avian Pathology (Theory)
Course Code: SAP-301
Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any 5 (FIVE) questions from each section.
 Use separate answer scripts for each section.)


Section-A

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|----|----|---|---|
| 1. | a. | Define acute infectious hepatitis and cirrhosis. | 2 |
| | b. | Classify hepatic necrosis according to their locations. | 3 |
| | c. | Define choke. Write down the causes and significance of choke in cattle. | 2 |
| 2. | a. | Define pneumonia. Describe the stages of pneumonia in brief. | 3 |
| | b. | Enlist the special types of pneumonia and describe medication pneumonia. | 2 |
| | c. | Briefly describe laryngeal hemiplegia. | 2 |
| 3. | a. | Enlist the congenital and hereditary abnormalities of kidney. | 2 |
| | b. | Describe the pathogenesis and pathology of glomerulonephritis. | 5 |
| 4. | a. | Briefly describe the pathogenesis of fibrous osteodystrophy in dog. | 3 |
| | b. | Write down the pathogenesis and pathology of equine rhabdomyolysis. | 4 |
| 5. | a. | Define abortion and still birth. What are the common causes of abortion in cattle. | 3 |
| | b. | What is retention of placenta? Why it is more common in case of brucellosis? | 2 |
| | c. | Write short note on orchitis. | 2 |
| 6. | a. | Enlist the common egg borne diseases of poultry. | 1 |
| | b. | Write down the postmortem findings of the following diseases:
(i) Infectious bursal disease,
(ii) Avian influenza, and
(iii) Fowl typhoid. | 6 |

Section-B

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|-----|----|---|---|
| 7. | a. | Write down the gross and microscopic changes of vesicular stomatitis. | 2 |
| | b. | Define the following terms:
(i) Ranula, (ii) Ascitis, and (iii) Epistaxis. | 3 |
| | c. | Briefly describe traumatic reticuloperitonitis. | 2 |
| 8. | a. | What is the etiology of colibacillosis in poultry? Briefly describe different forms of colibacillosis in poultry. | 5 |
| | b. | Enlist the post mortem lesions of brooder pneumonia in chicks. | 2 |
| 9. | a. | What are the causes of hemorrhagic and hemolytic anaemia? | 4 |
| | b. | What do you mean by toxic aplastic anaemia? | 1 |
| | c. | Enlist the neoplasms encountered in hemic and lymphatic system. | 2 |
| 10. | a. | Describe the etiology and pathology of coccidiosis in chickens. | 4 |
| | b. | Enlist the nutritional deficiency diseases in poultry. Write short note on exudative diathesis. | 3 |
| 11. | a. | Define diarrhoea. Describe the mechanism of diarrhoea. | 3 |
| | b. | Describe the pathogenesis and pathology of ruminal acidosis. | 4 |
| 12. | a. | Classify cardiac failure and define each type. | 2 |
| | b. | Write down the etiology of endocarditis and myocarditis. | 2 |
| | c. | Write short note on goiter. | 3 |

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Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination, 2014
Course Title: Veterinary Entomology (Theory)
Course Code: VEN -301
Full Marks: 55, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any 4 (FOUR) questions from each section where question No. 6 is compulsory. Use separate answer scripts for each section.)

Section-A

1. a. Classify veterinary important arthropods with example in each case. 4
b. Briefly describe the significance of studying entomology. 3
2. a. Draw and label a typical insect egg. 2
b. What is metamorphosis? Classify metamorphosis with example. 5
3. a. Draw and label a typical mosquito. 3
b. Enlist the morphological and behavioral differences between *Anopheles* and *Culex* species. 4
4. a. Differentiate between vector and carrier. 2
b. Write down the vector importance of the following insects: 5
(i) *Phlebotomus* fly, (ii) *Glossina* fly, (iii) *Hematobia* fly,
(iv) *Tabanus* fly, and (v) *Anopheles* mosquito.
5. a. Discuss the life cycle of Tse Tse fly. 2
b. What is myiasis? Classify myiasis with example. 5

Section-B

6. a. Differentiate between Anoplura and Mallophaga. 3
b. List four species of lice affecting livestock in Bangladesh. 2
c. Name two lice-borne diseases with their causal agent. 1
7. a. What do you mean by mange and scabies? Write down the pathogenesis and pathologic significance of canine demodocosis. 4
b. Write short note on tick paralysis and tick toxicosis. 3
8. a. Describe the morphology and life cycle of the tick *Boophilus microplus*. 4
b. Differentiate hard tick from soft tick. 2
c. Name four tick species affecting cattle in Bangladesh. 1
9. a. What is insecticide and insecticide resistance? Give example of them. 3
b. Discuss morphological features of red mite and scaly leg mite of poultry. 4
10. a. Enlist the flea affecting the animals in Bangladesh. Write down the morphology and life cycle of the most important one of them. 5
b. How you can diagnose mite infestation in dog? 2

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination-2014
Course Title: General Pharmacology (Theory)
Course Code: GPH-301
Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any 3 (THREE) questions from each section of which question 1 and 5 are compulsory. Use separate answer scripts for each section.)

Section-A

1. a. Define Pharmacology. What are the scopes of Pharmacology? 2
b. Describe the receptor mechanism of action of drugs in the living body. 3
c. Define and classify prescription. What are the parts of prescription? Write a model prescription for asthma of goat. 6

2. a. Define and classify purgatives with examples. 3
b. Write down the mode of action, dose, indication and contraindication of direct irritant purgatives in cattle. 5
c. What is the justification of use of emetics and anti-emetics in livestock? Differentiate laxative from purgatives. 4

3. a. Define and classify mucolytic and anti-tussive drugs with examples. 3
b. Write down the mode of action, dose, indication and contraindication of salbutamol in livestock. 5
c. Briefly describe the pharmacological action of expectorants. 4

4. a. Classify NSAID's with examples. 4
b. Write down the mechanism of action, indication, dose, contraindication and side effects of one of the steroidal drugs. 4
c. Write down the mode of action and clinical uses of H₁ and H₂ receptor blocker. 4

Section-B

5. a. Define Biotransformation and Biological half life. 3
b. Write down the sources of drugs with examples. What do you mean by Pharmacopeia? 4
c. Briefly describe the branches of Pharmacology. 4

6. a. Differentiate Heart tonic and Heart stimulants. 4
b. Write down the mode of action, dose, indication and contraindication of digitalis in dog. 4
c. Write down the mode of action of ANTU and red squill in rats. 4

7. a. Differentiate tranquilizer, sedatives, narcotics and hypnotics. 3
b. Write down the dose, indication, mode of action and contraindication of ketamine in cattle. 5
c. What are general anesthetics? Write down the characteristics of ideal anesthetics. 4

8. Write short notes on (any three) 3×4= 12
a. Drug incompatibilities b. Heparin
c. Antiseptic and Disinfectants d. Conjugation of drugs.

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Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination, 2014
Course Title: Regulatory and Reproductive Physiology (Theory)
Course Code: RRP-301
Full Marks: 55, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any 3 (three) questions from each section of which Question No. 1 is compulsory. Use separate answer script)

Section-A

1. a. Define and classify hormones on the basis of their chemical nature. 3
b. State the mode of action of steroid hormones. 3
c. Describe the regulation of hormone production. 4
2. a. List endocrine glands with their secretions associated with reproduction. 3
b. Name the functional steroids of the body. 3
c. Glucocorticoids are hormones of stress-explain why? 3
3. a. Name Pituitary and hypothalamic hormones. 3
b. State the mode of action of Thyroxine. 3
c. Write the role of Parathyroid hormones. 3
4. a. State the functions of Ovary and Testes. 3
b. Name the Pancreatic hormones with their functions. 3
c. State the role of uterus and Pineal gland in reproduction. 3

Section-B

5. a. Define CSF. Write down its composition. Sketch the flow of CSF. 3
b. How does vitamin D play role in controlling plasma calcium concentration? 3
c. How does ADH hormone secretion is being controlled? 3
6. a. What is Capacitation? Write down the physiological role of Testes and Leydig cells. 3
b. Enumerate the physiological role of Pampiniform plexus. Cite the time of descent of testes in different species. 3
c. Draw a typical spermatozoa and label different parts of it. 3
7. a. Define uterine milk. What are the physiological roles of uterine milk in gestation? 3
b. What are the hormones involved in successful parturition? Sketch the mechanism of parturition. 3
c. List the parturition signs in cow. 3
8. Write notes on any three 3x3=9
a. Ovogenesis
b. Reflex arc
c. Placenta
d. Prostaglandin PGF_{2α}

(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 scripts for each section.)

Section-A

1. a. Illustrate the term "heredity" and "variation". 2
b. Explain law of segregation with an example in animal. 4
c. Briefly describe the application of genetics in animal agriculture. 5
2. a. Distinguish between linkage and independent assortment. 3
b. Write down the possible causes that modify the Mendel's Law's. 4
c. Explain in brief the sex-linked inheritance in animal. 5
3. a. Define euploidy and aneuploidy. Write down the importance of ploidy. 3
b. Describe duplication and inversion chromosomal aberration in higher animals. 5
c. What is pleiotropism? Mention the factors those control gene expression. 4
4. a. Write down the properties of genetic code. 3
b. Why DNA replication is semi-conservative in nature? 3
c. Briefly discuss the Watson-Crick model of DNA structure with a neat diagram. 6

Section-B

5. a. Define sex. Mention different types of sex determination mechanism. 3
b. Describe the sex determination procedure in chicken. 5
c. Mention the haploid set of chromosome in sheep, goat, cattle, duck, quail, turkey and chicken. 4
6. a. Define gene. Write down the principal steps involved in gene expression in eukaryotes. 4
b. Write down the roles of proteins and enzymes involved in DNA replication. 4
c. Explain transcription process in eukaryotic cell. 4
7. a. Define map distance? How will you estimate the map distance and position of genes from a rabbit's example? 6
b. Write down the significance of crossing over. 2
c. Describe different kinds of crossing over with example (s). 4
8. Write short notes on any 3 (three) 3×4= 12
 - a. Genetic diseases and disorders
 - b. Epistasis
 - c. Sex-limited and sex-influence traits in animal
 - d. Different kinds of gene action

Chattogram Veterinary and Animal Sciences University
DVM 2nd year 2nd Semester Final Examination 2019
Subject: Veterinary Nematology (Theory)
Course Title: 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 must be answered together).

SECTION-A

1. a) What is bursa? Enlist the genera under bursate and non-bursate nematodes. 4
b) Classify esophagus of nematodes with examples. 3
2. a) Why the nematode is called roundworm? Describe the general morphology of ascarids. 3
b) Illustrate the harmful effects in horses by the larval stages of *Strongylus* spp. 4
3. a) Illustrate the life cycle and pathology of bovine Ostertagiosis. 5
b) Enlist the hookworms of domestic and pet animals. 2
4. a) Elaborate the biology and pathology of *Neoascaris vitulorum*. 4
b) Formulate an effective control of strategy against filaroids. 3
5. a) Diagnose the following parasites in the laboratory through coprological examination- (any five) 1×5
=5
i) *Haemonchus contortus* ii) *Trichostrongylus axei* iii) *Capillaria* spp iv) *Trichuris trichiura* v) *Ascaris suum* vii) *Dictyocaulus viviparus*
b) 'Poultry cecal worm plays vital role in the epidemiology of blackhead disease'- Justify 2.
6. Write notes on any two of the following disease conditions. 3.5×2
=7
a) Dracunculosis b) Summer sore c) Barber's pole worm

Section B

7. a) Mention the risk factors associated with 'humpsore' and 'muscle worm' infection 3
b) Illustrate the life cycle of 'canine hookworm' 4
8. a) Enlist nematodes that are transmitted through 'skin penetration', 'trans-mammary' and 'transplacental'. 3
b) Write down the life cycle, pathogenic significance and diagnosis of 'gapeworm' infection in turkey. 4
9. a) Contrast the life cycles of *Ascaris suum*, *Toxocara canis* and *Neoascaris vitulorum*. 3
b) Write short note on 'hypobiosis' and 'PGE' 4
10. a) Explain why it is difficult to treat 'Dirofilariasis' in dog by anthelmintic? 3
b) Write down the pathogenesis and clinical findings of 'Spirocercosis' in stray dogs. 4
11. a) How will you morphologically identify the following parasites in a clinical pathology laboratory? 0.5×6
=3
i) *Haemonchus contortus* ii) *Ancylostoma tubaeformis* iii) *Trichuris globulosa* iv) *Strongylus equinus* v) *Macracanthorhynchus hirudinaceus* vi) *Dirofilaria immitis*
b) State the life cycle and public health significance of '*Trichinella spiralis*' infection 4
12. a) Enlist cuticular modifications of nematodes with appropriate examples. 3
b) Write down the scientific name / causal agent against their below mentioned common name / condition 4
i. Poll evil ii. Summer sore iii. Calabar swelling iv. Pinworm (man) v. Redworm (horse) vi. Fork worm
vii. Whipworm (dog) viii. Eyeworm (poultry)

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*.