Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination-2015
Course Title: Systemic and Avian Pathology (Theory)
Course Code: SAP–301 (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) Define choke. Briefly describe its causes and significance in ruminants. 3
   b) Define and classify enteritis. 2
   c) What is hepatitis? Enlist the types of hepatitis. 2

2. a) What is pericarditis? Describe different types of pericarditis. 3
   b) Define arteriosclerosis and atherosclerosis. What are the pathological consequences of atherosclerosis? 4

3. a) Define myopathy and myositis. 2
   b) List the diseases caused by the deficiency of Vitamin-E in dog, cat, chicken and calf. 2
   c) Write down the pathogenesis of white muscle disease in calves. 3

4. a) What are the cysts commonly found in ovary and mesovarium? Differentiate follicular cyst from luteinized cyst. 3
   b) List the infectious agents causing abortion and still birth. 2
   c) Define orchitis and mention its causes. 2

5 a) What is colibacillosis? Describe briefly different forms of colibacillosis. 4
   b) Write down the postmortem findings of Infectious Bursal Disease in poultry. 3

6 a) Enlist the immunosuppressive diseases of poultry. 1
   b) Write down the postmortem findings of the following diseases (any three): 6
   (i) Fowl cholera, (ii) Avian influenza,
   (iii) Newcastle disease and (iv) Pullorum disease.

Section-B

7. a) Define rhinitis and name some microbial agents causing it. 2
   b) Enlist five most significant microscopic lesions of pneumonia. 3
   c) Define alveolar and interstitial pulmonary emphysema. 2

8. a) What is freemartinism? 2
   b) Write down the mechanism of formation of follicular cyst. 3
   c) What is pyometra? Write down the pathogenesis of pyometra in cows. 2

9. a) Define anemia. Classify it along with the etiology of each kind. 5
   b) Write down the causes of splenomegali. 2

10. a) Briefly describe different forms of cirrhosis. 3
    b) Define intussusceptions, volvulus and tortion. 2
    c) Define hydrocephalus, encephalomyelitis, meningitis and gitter cell. 2

11. a) Write down the pathogenesis and pathology of mycoplasmosis in poultry. 5
    b) Mention postmortem findings of cecal coccidiosis in chickens. 2

12. a What is pyelonephritis? Describe the pathogenesis of ascending pyelonephritis. 4
    b Describe the factors that aggravate urolithiasis. 3

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination, 2015
Course Title: General Pharmacology (Theory)
Course Code: GPH-301(T)
Full Marks: 70; Time: 3 Hours

(Figures in the right margin indicate full marks. Answer **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) Define Pharmacology. What are the branches of Pharmacology? 3
   b) What are the routes of administration of drugs? Describe the advantages and disadvantages of oral and intravenous routes for drug administration. 5
   c) What is Biotransformation? Write down the functions of Biotransformation. 3

2. a) What is the justification of use of astringent and protectan in diarrhea? Differentiate between carminatives and antizymotics. 4
   b) Write down the mode of action, dose, indication and contraindication of vegetable oil in cattle. 4
   c) Differentiate between laxatives and purgatives. Classify intestinal stimulants with examples. 4

3. a) Define and classify diuretics with examples. 4
   b) Write down five modern diuretics. Describe the mode of action of hexamine. 4
   c) Name the common urinary acidifiers used in veterinary practices with their uses. 4

4. a) Define and classify autacoids with examples. Differentiate autacoids from hormones. 4
   b) How is histamine released from the body. Write down the name of H_1 and H_2 receptor blockers. 4
   c) Write down the mode of action, dose, indication and contraindication of maloxican in livestock. 4

Section-B

5. a) Differentiate between alkaloids and glycosides with examples. 4
   b) Write down the mode of action, dose, indication and contraindication of cardiac glycosides in dog. 4
   c) Write down the pharmacological action of adrenaline. 3

6. a) What are the differences between narcotics and sedatives? Briefly describe the stages of surgical anaesthesia. 4
   b) Classify adrenergic drugs with examples. List the name of local anesthetics used in livestock. 4
   c) Describe the mode of action, dose, indication and contraindication of xylazine hydrochloride in horse. 4

7. a) Differentiate expectorants from bronchodilators. 4
   b) Define and classify anti-tussive drugs with examples. 3
   c) Write down the mode of action, dose, indication and contraindication of bronchodilators in cat. 5

8. Write short notes on the followings (any four): 3×4=12
   a. Pharmacodynamics
   b. Drug synergism
   c. Blood volume expanders
   d. Prostaglandin
   e. Urinary antiseptics

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination-2015
Course Title: Veterinary Entomology (Theory)
Course Code: VEN–301 (T)
Full Marks: 55; Time: 3 Hours

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

Section-A

1. a) Enlist the morphological features of the phylum Arthropoda. 2
   b) Briefly describe the life cycle, pathologic significance and control measures of *Phlebotomum* sp. 5

2. a) Enlist the beneficial and harmful effects of arthropods. 2
   b) Write down the scientific name(s) of the vectors transmitting the following diseases: 5
   (i) Dengue fever, (ii) Cerebral malaria, (iii) Humpsore, (iv) Babesiosis, (v) Anaplasmosis, (vi) Canine heartworm infection, (vii) Elephantiasis, (viii) Anthrax, (ix) Human plague and (x) Lishmaniasis.

3. a) Define and classify myiasis with examples. 5
   b) What is screw worm? Why they are so called? 2

4. a) Differentiate the followings: 3
   (i) Burrowing mite and non-burrowing mite.
   (ii) Biting lice and sucking lice.
   b) Write down the scientific names of the followings: 2
   (i) One host tick of cattle, (ii) Sheep ked, (iii) Stable fly, (iv) Sheep nasal bot fly, (v) Long-nosed cattle louse and (vi) Tse tse fly.
   c) Write a short note on demodectic mange in dog. 2

5. a) Mention the life cycle and pathologic significance of sheep nasal bot fly infestation. 4
   b) List the common lice found in cattle, sheep and goats in Bangladesh. 3

Section-B

6. a) Mention the differential features between the life cycle of one host, two host and three host ticks 4
   b) Draw and label the typical mouth parts of tick. 2

7. a) List six common flies recorded in Bangladesh. 2
   b) Write down the morphology, life cycle and pathologic significance of *Tabanus* sp. 5

8. a) Draw and label the wing of a typical Dipteran fly. 3
   b) Mention differential features in the life cycle stages of *Anopheles* sp. and *Culex* sp. 4

9. a) What is flea bite dermatitis? 1
   b) Write down the procedure of control of fly. 3
   c) How will you control mosquito in a locality? 3

10. a) Write short note on any two of the followings: 6
   (i) Red mite of poultry,
   (ii) Hypoderma infestation in cattle and
   (iii) Warble fly.
   b) Enlist four public health important arthropods. 1

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination-2015
Course Title: Animal Genetics (Theory)
Course Code: AGN-301 (T)
Full Marks: 70; Time: 3 Hours

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

Section-A

1. a) Define gene, multiple allele and genotype. 3
   b) What are the factors that should be considered for selecting genetic materials? 3
   c) State Mendel's second law with suitable example. 5

2. a) Differentiate complete dominance, incomplete dominance and co-dominance from each other with suitable examples. 3
   b) Explain with an example how classical 9:3:3:1 ratio may be converted into 12:3:1. 4
   c) What is multiple allele? Illustrate the multiple allelic inheritance of different blood groups. 5

3. a) What do you mean by genetic code and codon? 2
   b) Why genetic code is called "close to universal"? Differentiate genetic materials of prokaryotes from eukaryotes. 3
   c) How will you prove DNA replication is semi-conservative? 7

4. a) Briefly explain sex limited and sex influenced traits with suitable example in case of animal. 4
   b) Describe the genic balance mechanism of sex determination in drosophila. 4
   c) Differentiate between spontaneous and induced mutations. Write down the functions of different mutagenic agents that are responsible for induced mutation. 4

Section-B

5. a) Distinguish between monohybrid and dihybrid test cross. 2
   b) What are the differences between blending pattern in inheritance and particulate theory? 5
   c) State why Mendel's name is so significant for geneticist. Explain why do phenotypically identical or at least very similar parents may produce dissimilar offspring? 4

6. a) What is the difference between genetic map and chromosome map? Give the explanation about interference and coincidence. 4
   b) What is crossing over? Write down the significance of crossing over. 3
   c) How are genetic maps to be constructed? Why are extremely short regions used in establishing genetic map? 5

7. a) Differentiate between transcription and translation. Write down the names of protein and enzymes involved in DNA replication. 3
   b) Differentiate between euploidy and monoploidy. Write down the significance of polyploidy. 4
   c) List important genetic diseases in cattle. What are the strategies you will follow for controlling genetic diseases in animal? 5

8. Write short notes on any three of the followings: 3x4= 12

   (i) Bacterial transformation
   (ii) Heredity and environment for the expression of phenotype
   (iii) RNA splicing
   (iv) Wobble hypothesis

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination-2015
Course Title: Virology (Theory)
Course Code: VIR–301 (T)
Full Marks: 70; Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any **five questions** from each section. Fractions of a question must be answered together. Use separate answer script for each section.)

Section-A

1.	a)	Differentiate between virion and viroid.	2
	b)	Mention some useful viruses.	1
	c)	Discuss scopes of virology.	4
2.	a)	Which discovery in virology do you consider as a breakthrough? Justify.	3
	b)	Discuss different parts of a virus with emphasis of function of the part.	4
3.	a)	What do you mean by impurity of virus? What are the ways to purify them?	2
	b)	Why it is necessary to inactivate the viruses? Discuss inactivation methods of viruses.	5
4.	a)	Define interferon. How does it work?	3
	b)	Write down the biological properties of interferon.	3
	c)	What is the basis of virus classification?	1
5	a)	How does virus enter into the host cell?	3
	b)	Discuss virus transcription process.	4
6	a)	Discuss virus versus cell interaction.	3
	b)	Mention possible routes of viral invasion into the animal body with five examples in each case.	4

Section-B

7.	a)	Differentiate fowl pox virus from chicken pox virus.	3
	b)	Explain the sequential steps of pathogenesis of fowl pox virus in a chicken.	4
8.	a)	Differentiate Marek's disease from Lymphoid Leukosis virus.	4
	b)	Mention the pathogenesis of Marek's disease virus.	3
9.	a)	What are the samples will be taken for the following viruses: FMDV, AIV, Newcastle disease virus and rabies virus.	4
	b)	Mention the lesions in avian embryo in propagating the following virus: IBV, avian encephalomyelitis virus and duck plague virus.	3
10.	a)	Mention the OIE criteria of AIV.	3
	b)	How will you characterize NDV in a laboratory?	4
11.	a)	List the viral diseases of cattle and sheep with family, symmetry, sense, DNA/RNA, envelope / naked, and site of replication in a cell	7
12.	a	How successful can vaccination be done against IBDV in a flock?	3
	b	Differentiate street virus from fixed virus.	2
	c)	Explain the term 'Prion'.	2

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination, 2015
Course Title: Regulatory and Reproductive Physiology (Theory)
Course Code: RRP-301(T)
Full Marks: 55, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer **three** questions from each section of which **question no. 1 is compulsory**. Use separate answer script for each section.)

Section-A

1. a) Define nerve, receptor, stimuli, impulse, hormone and neurotransmitter. 3
   b) How is impulse transmission conducted at the synapse and along the nerve fiber? 4
   c) What is reflex arc? Classify reflex on the basis of number and nature of synapse. 3

2. a) Classify hormones based on function with examples. 2
   b) Briefly describe the interrelationship among parathhormone, calcitonin and vitamin D regarding maintenance of calcium homeostatsis. 4
   c) Write down the role of thyroxine on basal metabolic rate. 3

3. a) Aldosteron is a life saving hormone- Justify the statement. 3
   b) Enumerate the hormones related to carbohydrate metabolism. 2
   c) Briefly describe the functions of gluco-corticoides on carbohydrate and fat metabolism. 4

4. a) List the primary reproductive hormones in both sexes. 2
   b) Briefly describe the hormonal regulation of ovarian functions. 4
   c) Which hormone is responsible for luteolysis and how does it do that? 3

Section-B

5. a) What is the precursor of catecholamine? Why is it called as catecholamine? Discuss the physiological role of catecholamine. 3
   b) Enumerate the mechanism of synthesis of thyroxine hormone. 3
   c) Define spermatogenesis. Discuss the hormonal control of spermatogenesis. 3

6. a) What is neuron? Classify it. Draw and label a typical neuron. 3
   b) Define CSF. Write down its composition and sketch the flow of CSF. 3
   c) Briefly discuss the importance of light and dark in a layer farm for egg production. 3

7. a) Define endocrine system. How do you prove a relationship between endocrine system and nervous system? 3
   b) What are the hormones involved in successful parturition? Enlist the hormones which can be helpful in pregnancy diagnosis of animal. 3
   c) List the length of estrous cycle, estrous period and gestation of cow, doe and queen. 3

8. Write short notes on any three of the followings : 3×3=9
   a. Posterior pituitary hormones
   b. Placenta
   c. Neurotransmitter
   d. Autonomic nervous system
   e. Chemoreceptor

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination-2015
Course Title: Poultry Production (Layer and Broiler)
Course Code: PPR-301 (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.)

Section-A

1. a) State the prospects and problems of poultry industry of Bangladesh. How will you overcome these problems? 6.0
   b) Mention five commercial layer strains and five commercial broiler strains. 3.0
   c) Define Hybrid, Condition, Pullet and Broiler. 2.0

2. a) What is fumigation? Write down the procedure of fumigation in a modern hatchery. 3.0
   b) Discuss the selection, care and storage of hatching eggs. 4.0
   c) Briefly discuss the factors that affect the fertility of chickens eggs. 5.0

3. a) What is FCR? Describe the factors that influence FCR in a broiler flock. 5.0
   b) Calculate the amount of feed needed for rearing 2000 Cobb-500 broilers up to 6 weeks of age. 3.0
   c) Describe the points of site selection for poultry farming. 4.0

4. a) Write down the different hormones involved in the egg production with their functions. 3.0
   b) State in shortly the embryonic development in last 15 days of incubation period. 5.0
   c) What is the uniformity in a laying flock? State the importance of uniformity in a laying flock. 4.0

Section-B

5. a) What is brooding? Mention the brooding requirements of broiler chicks. 3.0
   b) State the different feeding systems for poultry. 3.0
   c) How to distinguish layers and non-layers? 2.0
   d) Give the lighting schedule for egg producing chickens in a flock. 3.0

6. a) What is egg? Write down the nutritive value and chemical composition of chicken egg. 3.0
   b) Explain hen day and hen housed egg production with formula of estimation. 3.0
   c) How would you select quality chicks of broilers? 3.0
   d) Define heat stress? How will you manage heat stress in a commercial broiler flock? 3.0

7. a) Suppose, the area of a layer house is 20000 sq. ft and 2 foot- candle is required for illuminate the house. Calculate the required number of 100 watt bulb for the layer house. 5.0
   b) How would you maintain Bio-security in a poultry farm? 3.0
   c) What is structural Bio-security? Give a vaccination schedule for commercial layer flock. 4.0

8. Write short notes **(Any four)** **3x4=12**
   a) Backyard poultry farming
   b) Molting, culling and selection of layer
   c) Nutritional requirements for layer, starter and grower
   d) Reasons for sudden egg drops in egg production.
   e) Management of layer in Summer.

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination-2014
Course Title: Animal Genetics (Theory)
Course Code: AGN - 301 (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 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) *i. Haemonchus contortus* ii) *Trichostrongylus axei* iii) Capillaria spp iv) *Trichuris trichiura* v) *Ascaris suum* vii) *Dictyocaulus viviparus*	1×5 =5
	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. a) Dracunculosis b) Summer sore c) Barber's pole worm	3.5×2 =7

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? *i)Haemocnhus contortus* ii) *Ancylostoma tubaeforms* iii) *Trichuris globulosa* iv) *Strongylus equinus* v) *Macracanthorhynchus hirudinaceus* vi) *Dirofilaria immitis*	0.5×6 =3
	b)	State the life cycle and public health significance of '*Trichinella sprialis*' 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 I. Poll evil ii. Summer sore iii. Calabar swelling iv. Pinworm (man) v. Redworm (horse) vi. Fork worm vii. Whipworm (dog) vii. Eyeworm (poultry)	4

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 nematodes. 3
      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*.