

**Chittagong Veterinary and Animal Sciences University**  
**DVM 3<sup>rd</sup> Year 1<sup>st</sup> Semester Final Examination, 2013**  
**Course Title: General Pharmacology (Theory)**  
**Course Code: GPH-301**  
**Full Marks: 70, Time: 3 Hours**

(Figures in the right margins indicate full marks. Answer **three** questions from each section of which Question 1 & 5 are compulsory. Use separate answer script for each section.)

### Section-A

1. a) Define Pharmacology and Pharmacopoea. 3  
b) Briefly describe the general mechanism of drug action. 4  
c) Write down the source of drugs with examples. How will you differentiate alkaloid from glycosides. 4
  
2. a) Define prescription and classify it with example. 4  
b) 2 years dog, history of Asthma complained with cough and retention of urine bring to you. Physical examination revealed tachycardia and temp 104° F. what is your diagnosis and make a prescription? 6  
c) Differentiate drug with medicine. 2
  
3. a) Classify intestinal stimulant. 3  
b) Write down the mode of action, dose, indication and contra-indication of vegetable oils in cattle. 5  
c) What is the justification of use of Purgatives in Livestock? Differentiate antizymotics from carminatives. 4
  
4. a) Briefly describe the stage of surgical anaesthesia. 3  
b) Write down the dose, indication, contra-indication and mode of action of lidocaine in dog. 5  
c) Differentiate hypnotics from narcotics. Write down the characteristics of an ideal anaesthetics. 4

### Section-B

5. a) Define and classify expectorants with example. 3  
b) Differentiate bronchodilator from expectorants. 4  
c) Write down the dose, mode of action, indication and contra-indication of one (1) of the bronchodilator in dog. 4
  
6. a) Define and classify diuretics with examples. 3  
b) Write down the mode of action, dose, indication and contra-indication of Frusimide diuretics in livestock. 5  
c) Briefly describe the uses of urinary alkalizer and antiseptics in Veterinary practices. 4
  
7. a) Define and classify autacoids with examples. 3  
b) Write down the Pharmacological action, mode of action and therapeutic uses of  $H_1$  and  $H_2$  receptor blocker. 5  
c) Differentiate autacoids from hormones. Write down the mechanism of histamine release. 4
  
8. Write short notes on (any four) 4×3= 12
  - a) Biotransformation.
  - b) Bioavailability.
  - c) Placebo.
  - d) Therapeutic Index.
  - e) Cardiac glycosides.



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

**Section-A**

1. a) Define virus according to different scientists and ICTV. 2  
b) Explain the theories of origin of virus. 2  
c) Describe the structure of a typical virus. 3
2. a) Name the stages of replication cycle of viruses. 2  
b) Describe the methods of penetration of viruses into host cells with diagrams. 3  
c) Show the reasons why one can argue a virus to be a non-living entity against its properties of life. 2
3. a) Enumerate routes of virus entry into a host and name the important viruses those gain entry through the respiratory tract. 3  
b) Describe with diagram how viruses spread their infection through the body and then release from it. 4
4. a) *Describe by hand* Differentiate the physico-chemical properties of the family paramyxo viridae and name veterinary important viruses under the family. 3  
b) How will you diagnose HPAI in a laboratory? 4
5. a) Describe the physico-chemical properties of the family Picorna viridae and name veterinary important viruses under the family. 3  
b) Differentiate duck plague virus from duck viral hepatitis. 2  
c) Describe the laboratory diagnostic procedure of canine distemper. 2
6. a) Define interferon. Mention the salient features of interferon. 2  
b) Write down the mechanism of interferon. 2  
c) What are the groups of anti viral drugs? Mention the mechanism of oseltamivir and amantadine. 3

**Section-B**

7. a) What is the basis of modern virus classification? On basis of modern classification how many groups of virus are present with suitable example? 2  
b) Describe the transcription process of (+) sense (-) sense and retro virus. 5
8. a) List some important viral disease of poultry, duck and cat mentioning the name of family, type of nucleic acid, symmetry, +/- sense, presence or absence of envelope, site of replication in a tabular form. 7
9. a) According to OIE how will you characterize avian influenza virus? 3  
b) What are the segments present in avian influenza virus? Mention the type and function of 6, 7 and 8 the segment of AIV. 4
10. a) What are the segments of IBDV? Mention its role. 3  
b) Describe the vaccination failure of IBD vaccine. 4
11. a) What are the polypeptides present in NDV with mentioning their role? 2  
b) Mention the strains of NDV with example. 2  
c) How will you characterize an isolate of NDV? 3
12. a) What are the sample will you collect for diagnosis for following disease i) FMDV 3  
ii) PPR iii) Rabies  
b) Describe the cultural properties of following viruses after embryo inoculation 4  
i) Avian encephalomyelitis virus, ii) Infectious bronchitis virus iii) Duck plague virus

**Chittagong Veterinary and Animal Sciences University**  
**DVM 3<sup>rd</sup> Year 1st Semester Final Examination/2013**  
Course Title: Poultry Production (Layer & Broiler) (Theory)  
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, where **question no. 1(one) and 5(five)** are compulsory. Use separate answer scripts for each section).

### Section-A

1. a) What do you mean by Poultry and Poultry Science? 2  
b) Write down the zoological classification of chickens. 4  
c) Mention two breeds each from meat, egg and dual types of chickens with their productive traits. 5
2. a) Define fertility and hatchability of eggs. 2  
b) State the factors that affect the fertility and hatchability of eggs. 6  
c) Write the causes of feather pecking and its remedial measures in layer flock. 4
3. a) Briefly discuss the requirements for successful broiler production. 4  
b) What is bio-security? How do you maintain the bio- security in a broiler farm? 5  
c) What are the effects of higher and lower temperatures in poultry? 3
4. Write short notes on any 4 (four) of the followings: 4×3= 12  
a) Mechanism of egg- shell formation;  
b) Flow chart of broiler processing unit;  
c) Wild fowl;  
d) Incubation period of muscovy, goose, turkey, ostrich, swan and deshi chickens eggs;  
e) Vices of poultry; and  
f) Case vs. floor rearing.

### Section-B

5. a) Distinguish between hen-house and hen-day egg production. 3  
b) "Uniformity in layer flock is important" - Explain. 3  
c) Discuss a suitable housing system for rearing indigenous chickens under rural condition. 5
6. a) What is selection. Discuss briefly the selection methods used in Poultry. 4  
b) How were the modern breeds and varieties of chickens developed? 3  
c) How do you differentiate between layer and non-layer? State the floor, feeder and waterer space requirements of chickens at different ages. 5
7. a) Define housing. State the importance of chickens housing in poultry. 4  
b) Which one of the rearing systems would you suggest to rear commercial layer and why? 4  
c) Discuss briefly the constraints of poultry farming in Bangladesh. 4
8. Write short notes any 4 (four) of the following: 4×3= 12  
a) Induced moulting;  
b) Precocity;  
c) False prolapse;  
d) Game birds;  
e) Marketing channels of live and dressed birds; and  
f) Site selection of poultry farm.

**Chittagong Veterinary and Animal Sciences University**  
**DVM 3<sup>rd</sup> Year 1<sup>st</sup> Semester Final Examination, 2013**  
**Course Title: Systemic and Avian Pathology (Theory)**  
**Course Code: SAP-301**  
**Full Marks: 70, Time: 3 Hours**

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

**SECTION-A**

1. (a) What do you mean by nasal polyps? How will you differentiate it from other nasal lesions? 2  
 (b) Differentiate pneumonia from pneumonitis histologically. 2  
 (c) Briefly discuss the complications of pneumonia. 3
2. (a) Describe the features of anemic blood film or smear. 2  
 (b) Write down the causes of hemolytic and hemorrhagic anemia. 5
3. (a) List congenital and hereditary anomalies of kidney. 2  
 (b) What do you mean by pyelonephritis? What are the routes of infection in case of pyelonephritis? List the causes of pyelonephritis in different animals. 4  
 (c) What do you mean by primary and secondary contracted kidney? 1
4. (a) Mention the common nutritional deficiency diseases found in poultry and give their etiology. 2  
 (b) Describe the conditions found in chickens due to deficiency of vitamin E and vitamin A. 5
5. (a) Write down the gross and microscopic lesions of infectious bursal disease. How will you differentiate it from Newcastle disease? 5  
 (b) Write down the post mortem findings of avian influenza. 2
6. (a) What is freemartinism? 2  
 (b) Write down the pathogenesis of endometrial hyperplasia in cow. 3  
 (c) What do you mean by cryptorchidism? 2

**SECTION-B**

7. (a) Define stomatitis. Write down the causes of different types of stomatitis. 2  
 (b) Define cirrhosis. Classify cirrhosis on the basis of causes. 2  
 (c) Write down the pathogenesis of frothy bloat in ruminants. 3
8. (a) Describe the congenital defects of cardiovascular system which leads to left to right stunning of blood flow. 4  
 (b) Write down the causes of different types of pericarditis. 1  
 (c) Describe the pathogenesis of formation of heart failure cell. 2
9. (a) Describe the pathogenesis and pathology of rickets in young animals. 4  
 (b) Sketch the pathogenesis of equine rhabdomyolysis. 3
10. (a) List different types of enteritis. Describe each type briefly. 4  
 (b) Briefly describe the following terms:- 3  
 Reflux esophagitis, intussusception and vagus indigestion.
11. (a) Enlist the vertically transmissible diseases of poultry. 1  
 (b) Write down the post mortem findings of the following diseases:- 6  
 (i) Fowl cholera, (ii) Pullorum disease in poultry, and (iii) Chicken coccidiosis.
12. (a) What are the cysts commonly encountered in ovary and mesovarium? Describe each type in brief. 5  
 (b) What do you mean by abortifacient infections? List the infectious agents causing abortion. 2

**Chittagong Veterinary and Animal Sciences University**  
**DVM 3<sup>rd</sup> Year 1<sup>st</sup> Semester Final Examination, 2013**  
**Course Title: Animal Genetics (Theory)**  
**Course Code: AGN -301**  
**Full Marks: 70, Time: 3 Hours**




(Figures in the right margin indicate full marks. Answer 3 (three) questions from each section of which **question no. 1** is compulsory. Use separate answer script for each section.)

### Section-A

- |    |  |   |
|----|--|---|
| 1. | a) Define alleles, lethal alleles and multiple alleles.  | 3 |
|    | b) Why did Mendel use the garden pea as the experimental material in his genetic study?            | 3 |
|    | c) What are the factors to be considered for selecting genetic materials?                          | 4 |
| 2. | a) Differentiate dominance from epistasis.   | 3 |
|    | b) Illustrate dominant epistasis with example in the field of animals.                             | 5 |
|    | c) Explain with an example of non-epistatic intergenic interaction.                                | 4 |
| 3. | a) Write down the characteristics of multiple alleles.   | 3 |
|    | b) Illustrate the multiple allelic inheritance of A, B, AB and O blood groups.                     | 6 |
|    | c) State the chromosome theory of linkage.   | 3 |
| 4. | a) What is central dogma? List the enzymes and proteins involved in DNA replication of eukaryotes. | 3 |
|    | b) How do DNA replication is controlled during cell cycle?   | 3 |
|    | c) Write in detail the sex chromosome mechanism of sex determination.                              | 6 |

### Section-B

- |    |  |        |
|----|--|--------|
| 5. | a) Define crossing-over and linkage.                                   | 2      |
|    | b) What is genetic mapping? How will you construct genetic map?        | 6      |
|    | c) Write a short note on chromosomal aberration.                       | 4      |
| 6. | a) Explain the term penetrance and expressivity.                       | 4      |
|    | b) Distinguish between purines and pyrimidines.                        | 3      |
|    | c) Describe the sex pili mediated genetical recombination of bacteria. | 5      |
| 7. | a) What do you mean by mutation?                                       | 2      |
|    | b) Describe point mutation with example.                               | 7      |
|    | c) Mention the significance of mutation.                               | 3      |
| 8. | Write shot notes on any three  | 3×4=12 |
|    | a) Eugenics.   |        |
|    | b) Genetic disorder.   |        |
|    | c) Test cross and back cross.  |        |
|    | d) Use of animal cloning and transgenesis in animal improvement.       |        |



**Chittagong Veterinary and Animal Sciences University**  
**DVM 3<sup>rd</sup> Year 1<sup>st</sup> Semester Final Examination, 2013**  
**Course Title: Regulatory and Reproductive Physiology (Theory)**  
**Course Code: RRP-301**  
**Full Marks: 55, Time: 3 Hours**

(Figures in the right margins indicate full marks. Answer **three** questions from each section of which Question 1 is compulsory. Use separate answer script for each section.)

### Section-A

1.
  - a) Define autocrine, paracrine and endocrine gland. 3
  - b) Write down the hormones of adrenal cortex with their mode of action. 3
  - c) List the hormones responsible for glucose homeostasis. Mention the functions of any one of them. 4
  
2.
  - a) Write down the composition of bull semen. 3
  - b) Draw and label different parts of a spermatozoa. 3
  - c) What is androgen? Write down the functions of testosterone and sertoli cells. 3
  
3.
  - a) Define and classify synapse. 2
  - b) State the functions of autonomic nervous system. 3
  - c) What is hormone of stress? Briefly discuss the role of hormones secreted from kidney in blood pressure regulation. 4
  
4. Write short notes on any three (3) of the followings: 3×3=9
  - a) Spermatogenesis, b) Hypothalamic hormones, c) Hormone of pancreas, and d) Anoestrus

### Section-B

5.
  - a) How are hormone carried to the target tissue? Write down the physiological mechanism of milk let down. 3
  - b) Write down the respective hormones for calcium homeostasis. Enlist the physiological role of parathormone. 3
  - c) List the hormones that work on kidney. Show the renin-angiotensin-aldosterone mechanism in sketch form. 3
  
6.
  - a) What is the role of pampiniform plexus? Write down the time of descent of testes of different species of animal. 3
  - b) What is capacitation? Write down the physiological role of testes, prostate gland and leydig cells. 3
  - c) What are the features of sperm? Where is the seminal fluid produced and what purpose does it serve? 3
  
7.
  - a) List the name of steroid hormones. State the role of progesterone and oxytocin in reproduction. 3
  - b) What is spermiogenesis? Discuss the hormonal control of spermatogenesis. 3
  - c) Write down the parts and their functions of oviduct of a chicken. 3
  
8.
  - a) List the name of seasonally polyoestrus animals. List the time of ovulation, length of oestrus and gestation period of cow, mare, doe and queen. 3
  - b) Define the following term: neuromuscular junction, conditional reflex, and withdrawal reflex. 3
  - c) Classify receptors with example(s) and write a short note on chemoreceptors. 3

N

/

**Chittagong Veterinary and Animal Sciences University**  
**DVM 3<sup>rd</sup> Year 1<sup>st</sup> Semester Final Examination, 2013**  
**Course Title: Veterinary Entomology (Theory)**  
**Course Code: VEN-301**  
**Full Marks: 55, Time: 3 Hours**

(Figures in the right margins indicate full marks. Answer **FOUR** questions from each section of which Question **6(Six)** is compulsory. Use separate answer script for each section.)

### Section-A

1. a. What is diapause? How will you distinguish the wings of Nematocera, Brachycera and Cyclorrhapha? 3  
b. How the climate change may affect arthropods? 4
2. a. How will you differentiate the antennae of Nematocera, Brachycera and Cyclorrhapha? 4  
b. Sketch the holometabolous life cycle of a typical fly. 3
3. a. How will you differentiate the males of the genera *Aedes*, *Anopheles* and *Culex*? 4  
b. Name the common flies affecting livestock in Bangladesh. 3
4. a. Name the important lice of poultry found in Bangladesh and describe their affects briefly. 4  
b. What is mange? How will you collect samples from mange to characterize the mite? What are the lesions found in different types of mange? 3
5. a. What is myiasis? How will you control myiasis? 4  
b. List different types of insecticides and fly repellents available in market. 3

### Section-B

6. a. Define Entomology and Veterinary Entomology. 2  
b. What are the basic structures found in typical insect mouthparts? 2  
c. "Arthropods can act as vector for important animal diseases"- explain. 2
7. a. Describe the life cycle of *Boophilus microplus*. 4  
b. Write short note on tick paralysis. 3
8. a. Differentiate between the mouthparts of mosquito and a typical fly. 3  
b. Discuss the morphology, life cycle and pathogenic significance of *Tabanus* sp. 4
9. a. What is the significance of Entomology in Veterinary science? 2  
b. List the ticks and lice affecting the cattle in Bangladesh. 2  
c. Draw the typical mouthparts of a tick. How do they help in taxonomic identification? 3
10. a. List the characteristics of the members under the order Siphonaptera. 2  
b. What is the pathogenic significance of flea in Veterinary science? 3  
c. How will you control flea from your pet? List all the How will you differentiate the preventive strategies. 2

**Chittagong Veterinary and Animal Sciences University**  
**DVM 3<sup>rd</sup> Year 1<sup>st</sup> Semester Final Examination, 2011**  
**Course Title: General Pharmacology (Theory)**  
**Course Code: GPH-301**  
**Full Marks: 70, Time: 3 Hours**

(Figures in the right margins indicate full marks. Answer **three** questions from each section of which Q 1 and 5 are compulsory. Use separate answer script for each section.)

**Section-A**

1. a. Define pharmacology, pharmacokinetics, pharmacodynamics and pharmacotherapeutics. 4  
b. What is pharmacopoeia? Differentiate between drug and medicine. 4  
c. Write down the scope of veterinary pharmacology. 3
2. a. Define and classify expectorants with examples. 3  
b. Write down the dose, mode of action, indications and contraindications of bronchodilator in livestock. 5  
c. How does an expectorant differ from a mucolyte? List the name of bronchodilators that are being used in veterinary practices. 4
3. a. Classify intestinal stimulants with examples. 3  
b. Write down the mode of action, dose, indications and contraindications of vegetable oils in cattle. 5  
c. Describe laxatives, purgatives and super-purgatives with examples. 4
4. a. Define diuretics. Enlist the indications of diuretics commonly used in animals. 4  
b. Write down the mode of action and uses of thiazide diuretics. 4  
c. Define urinary antiseptics. Write down the indications and mode of action of urinary antiseptics. 4

**Section-B**

5. a. Classify cardiac glycosides with examples. 3  
b. Write down the dose, mode of action, indications and contraindications of digitalis in dog. 5  
c. How will you differentiate heparin from warfarin? 3
6. a. Write down the advantages and disadvantages of injectable anesthetics. 4  
b. Write down the mode of action, clinical uses and doses of pentobarbital sodium in small and large animals. 4  
c. What is meant by "dissociative agent"? Give a brief note on clinical uses of xylazine and ketamine in dog and cat. 4
7. a. Define parasympathomimetics and parasympatholytics with examples. Write down the clinical uses of parasympathomimetics and parasympatholytics. 4  
b. Schematically show the biosynthesis and write down the clinical uses of prostaglandins in veterinary field practice. 4  
c. Briefly describe how histamine is released in the body? Write down the clinical uses of antihistaminics in veterinary practices 4
8. Write short notes on any three below 3×4=12
  - a. Anticoagulants
  - b. Adrenaline
  - c. Indirect purgatives
  - d. Drug incompatibility



**Chattogram Veterinary and Animal Sciences University**  
**DVM 2<sup>nd</sup> year 2<sup>nd</sup> 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 <i>Strongylus</i> 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 <i>Neoascaris vitulorum</i> .   | 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<br>=5   |
|    | i) <i>Haemonchus contortus</i> ii) <i>Trichostrongylus axei</i> iii) <i>Capillaria</i> spp iv) <i>Trichuris trichiura</i> v) <i>Ascaris suum</i> vii) <i>Dictyocaulus viviparus</i> |             |
|    | 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<br>=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 <i>Ascaris suum</i> , <i>Toxocara canis</i> and <i>Neoascaris vitulorum</i> .   | 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<br>=3 |
|     | i) <i>Haemochus contortus</i> ii) <i>Ancylostoma tubaeformis</i> iii) <i>Trichuris globulosa</i> iv) <i>Strongylus equinus</i> v) <i>Macracanthorhynchus hirudinaceus</i> vi) <i>Dirofilaria immitis</i> |             |
|     | b) State the life cycle and public health significance of ' <i>Trichinella spiralis</i> ' 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) vii. Eyeworm (poultry)   |             |

**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*.