

Chittagong Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination/2012
Course Title: Veterinary Nematology (Theory)
Course Code: VNE-202
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

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|---|--|-------------|
| 1 | a. Draw and label a transverse section of a typical nematode. | 3 |
| | b. Illustrate with diagram the basic forms of esophagus found in the nematodes. | 4 |
| 2 | a. Mention the final host and predilection sites of the following parasites:
(i) <i>Ostertagia trifurcata</i> , (ii) <i>Haemonchus contortus</i> ,
(iii) <i>Dictyocaulus viverrini</i> , (iv) <i>Chabertia ovina</i> ,
(v) <i>Oesophagostomum dentatum</i> , (vi) <i>Stephanurus dentatus</i> . | 3 |
| | b. Compare the morphological features of the following parasites in tabular form:
<i>Strongylus vulgaris</i> , <i>S. edentatus</i> and <i>S. equinus</i> . | 4 |
| 3 | Differentiate the followings:
(a) Cutaneous larval migrans from visceral larval migrans,
(b) Humpsore from summer sore. | 3.5×2
=7 |
| 4 | a. Briefly describe the epidemiology of haemonchosis in cattle. | 3 |
| | b. Write down the pathogenesis and pathologic significance of haemonchosis in sheep. | 4 |
| 5 | a. Mention the cuticular modifications of nematodes with diagram. | 4 |
| | b. Write a note on Periperturient Rise (PPR) in fecal egg count. | 3 |
| 6 | a. Describe the life cycle of <i>Anchylostoma caninum</i> with its pathogenic significance. | 5 |
| | b. Draw and label a typical bursa of the family Strongylidae. | 2 |

Section-B

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|----|---|---|
| 7 | a. Write down the common characters of ascarid nematodes. | 3 |
| | b. Mention different pathological conditions caused by ascarids in animals. How will you control them? | 4 |
| 8 | a. How do you morphologically identify the following parasites in laboratory:
(i) <i>Haemonchus similis</i> , (ii) <i>Oesophagostomum radiatum</i> ,
(iii) <i>Toxocara cati</i> , (iv) <i>Syngamus trachae</i> ,
(v) <i>Bonostomum phlebotomum</i> . | 5 |
| | b. Describe the pathogenesis oesophagostomiasis in cattle. | 2 |
| 9 | a. Mention the differential features in the life cycle of <i>Strongylus</i> spp. | 3 |
| | b. Define anthelmintics. What are the properties of an ideal anthelmintic? | 2 |
| | c. Enlist different groups of anthelmintics available in Bangladesh. | 2 |
| 10 | a. Mention the epidemiology and public health significance of trichinellosis. Why they are important in meat industry? | 3 |
| | b. Discuss the life cycle and pathogenesis of <i>Dioctophyma renale</i> infection in dog. | 4 |
| 11 | a. Write different epidemiological factors responsible for parasitic disease incidence. | 5 |
| | b. Discuss the role of age resistance with example in parasitic disease epidemiology. | 2 |
| 12 | a. Enlist the parasites causing verminous pneumonia in animals. Briefly describe the pathogenesis of husk in cattle. | 4 |
| | b. Describe the pathogenesis of dirofilariasis in dog. | 3 |

Chittagong Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination, 2012
Subject: Systemic Bacteriology and Mycology (Theory)
Course Code: SBM-202
Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any three questions from each section of which question number 1 and 5 are compulsory).

Section A

1. a) Write down the cultural characteristics of important Enterobacteria in chicken. 5
b) What does *Clostridium perfringes* type D causes in sheep and goat? 2
c) Mention the clinical specimens that you will collect to isolate *Clostridium perfringes*. Write down its isolation and identification procedures. 4
2. a) Give the cultural and biochemical characteristics of *Bacillus anthracis*. 5
b) Write down the toxins produced by *Clostridium perfringes* type A, B, C and D 4
c) Write short notes on plasmid. 3
3. a) What are mycotoxins? Write down important mycotoxins in poultry with their mode of action. 5
b) Classify fungi on the basis of morphology and habitats. 4
c) Name the dermatophytes of dog, cat and cattle at least two species. 3
4. a) Enumerate the species of *Hemophilus* affecting poultry and swine along with the diseases produced by them. 4
b) What do you mean by a bacterial isolate and strain? Mention the principal characteristics of the following bacteria i) *Corynebacterium* ii) *Listeria* iii) *Fusobacterium* iv) *Campylobacter* 5
c) Write down the causal agent of the following disease i) Foot rot in sheep ii) Big head in ram iii) Pink eye in cattle iv) Bumble foot in poultry 3

Section B

5. a) Write down the different types of hemolysis produced by Streptococci. 2
b) Briefly describe the virulence factors; including toxins of *Staphylococcus aureus* and their pathogenic effects. 6
c) Mention the general characteristics of mycotoxins. 3
6. a) Give the cultural properties of the following organisms i) *Streptococcus pyogenes* 2
ii) *Pseudomonas aeruginosa*
b) Write down the toxins produce by different types of *Clostridium perfringes* along with their biological activities and associated diseases 5
c) Outline the laboratory diagnostic procedure of *Bacillus anthracis*. 5
7. a) What are the clinical samples you will collect from cases of fowl cholera and hemorrhagic septicemia? How will you conduct the bacteriological examination to diagnose a case of hemorrhagic septicemia in buffalo? 6
b) Categorize *Salmonella* serotypes based on the host preference. 2
c) What is the causal agent of brooder pneumonia? How will you diagnose the disease? 4
8. a) Mention the pathogenic species belong to the genera *Corynebacterium*, *Burkholderia* and *Bordetella* 3
b) What are the principal serovars of *Leptospira* associated with infections in cattle, horse and dog? Give the laboratory diagnostic procedures of leptospirosis of dog. 7
c) List the non spore forming gram negative anerobic that have been implicated in infection of domestic animals. 2

Chittagong Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination, 2012
Subject: Dairy Microbiology (Theory)
Course Code: DMC-202
Full Marks: 55, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any three questions from each section of which **Question No. 1** is compulsory. Answer all fragmented parts of a question together).

Section A

1. a) What are the common characteristics of the family *Enterobacteriaceae*? 2
 b) Classify the family *Enterobacteriaceae* with examples. 4
 c) What is IMViC test? State its importance. 2
 d) Write down the two examples of microorganisms from each group of *Streptococcus*. 2

2. a) What do you mean by the term "Master Organism" in dairy industry and why? 3
 b) What are the significance of higher count in freshly drawn raw milk? 3
 c) State the Coliform Standards for Infant formula, raw milk to be pasteurized and Grade-A milk. 3

3. a) Does *Mycobacterium paratuberculosis* survive commercial HTST pasteurization? Explain. 2
 b) How can you detect *M. paratuberculosis* in raw milk and heat treated milk? Show it diagrammatically. 4
 c) Briefly discuss the various sources of contamination of milk. 3

4. a) What are the chemical agents used to cleanse dairy utensils? 3
 b) Write down the common chemical agents used for destruction of microorganisms. 3
 c) What are the physical agents used to sterilize glass-wares in a dairy microbiology laboratory? State the use of moist heat in sterilization. 3

Section B

5. a) State the different families that are related to "Dairy Microbiology". 4
 b) Write in detail about *Lactobacteriaceae*. 5

6. a) What do you mean by aroma and aromatic dairy products? 3
 b) What are the organisms responsible for aroma production? State their bacteriological characteristics. 3
 c) State the common practices that are practiced to produce aroma culture. 3

7. a) State the procedure of taking milk samples from a bulk tank for microbiological tests. 3
 b) What are the different methods used in counting bacteria in milk samples? 3
 c) Write merits and demerits of DMC. 3

8. Write short note any 3 (three) 3x3= 9
 a) HACCP.
 b) Milk from infected udder.
 c) Destruction of microorganisms by radiation.
 d) Gas formation in yoghurt.
 e) Microbiology of butter.
 f) Microbiological defects of milk.

Chittagong Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination, 2012
Subject: Animal Production (Sheep & Goat) (Theory)
Course Code: APR-202
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 & 5** are compulsory. Answer all fragmented parts of a question together).

Section A

- | | | |
|----|--|---------|
| 1. | a) Name 5 five goat breeds of Indo-Pak-Bangla sub-continent . | 2 |
| | b) What are the special features of goat for which it is known as “poor man’s cow”? | 5 |
| | c) State the special reproductive characteristics of Bengal Goat | 4 |
| 2. | a) List out common diseases of sheep and goat. | 3 |
| | b) State the goat vaccines that are available in Bangladesh with the schedules of vaccination in a commercial goat farm. | 4 |
| | c) State the feeding of doe during gestation period. | 5 |
| 3. | a) Mention the points for selecting the site for goat farming. | 5 |
| | b) State the daily routine activity for a commercial goat farm. | 7 |
| 4. | Write short note any 3 (three) | 3x4= 12 |
| | a) Breeding efficacy of goat | |
| | b) Shearing of sheep | |
| | c) Stocking density of goat and sheep | |
| | d) Restraining goat and sheep | |
| | e) Prospect of goat farming in Bangladesh | |

Section B

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|----|---|---------|
| 5. | a) State the concept of ONBS | 4 |
| | b) State in detail the goat development strategies and methods through modified ONBS in Bangladesh. | 7 |
| 6. | a) Enumerate the main features of goat farm management under semi intensive system of farming. | 7 |
| | b) Write a short note on “ cloud burst” | 5 |
| 7. | a) Mention the productive and reproductive traits of sheep and goat with their importance. | 5 |
| | b) Draw and label the male reproductive tract of buck or ram. | 4 |
| | c) What is estrus? Write down the signs of estrus in goat. | 3 |
| 8. | Write short notes (any 3 three) | 3x4= 12 |
| | a) Fine wool breeds. | |
| | b) Ewe ram ratio in intensive sheep farming. | |
| | c) Libido in goats. | |
| | d) Kid mortality in semi- intensive farming. | |
| | e) Maggot infestation in sheep. | |

Chittagong Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination/2012
Course Title: General Pathology II and Nutritional Pathology (Theory)
Course Code: GNP--202
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

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|---|---|---|
| 1 | a. Distinguish between- | 3 |
| | (i) Hypoplasia and atrophy, (ii) Anaplasia and metaplasia,
(iii) Cellular hypertrophy and hyperplasia. | |
| | b. Write down the causes of congenital anomalies with example. | 4 |
| 2 | a. Briefly discuss the causes of thrombosis. How will you differentiate a thrombus from a post mortem clot grossly? | 5 |
| | b. Enlist different kinds of emboli. | 2 |
| 3 | a. Describe the role of neutrophils and lymphocytes in inflammation. How eosinophils kill a parasite? | 4 |
| | b. How arachidonic acid metabolites and vasoactive amines mediate inflammation? | 3 |
| 4 | a. Briefly discuss the possible causes and mechanisms of development of autoimmunity. | 4 |
| | b. Prepare a list of immuno-deficient diseases of animals and poultry. | 3 |
| 5 | a. Briefly discuss the causes and pathogenesis of milk fever in cows. | 5 |
| | b. Write short note on hypomagnesemic tetany. | 2 |
| 6 | a. Discuss the mode of action and pathology of organophosphorous poisoning. | 4 |
| | b. Write a short note on chronic arsenic poisoning. | 3 |

Section-B

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|----|--|---|
| 7 | a. Name the benign and malignant neoplasms of the following cells or tissues:
Endothelium of blood vessels, mast cells, striated muscle, melanocytes,
squamous epithelium, hepatocytes, lymph node and osteocytes. | 2 |
| | b. Differentiate benign neoplasm from malignant neoplasm in a tabular form. | 2 |
| | c. How radiation can induce neoplasm? Name five oncogenic viruses. | 3 |
| 8 | a. Briefly describe the vascular events in inflammation. | 5 |
| | b. Write down the beneficial and harmful aspects of inflammation. | 2 |
| 9 | a. What do you mean by antigen, antibody and adjuvants? Classify antibody. | 4 |
| | b. Briefly show the mechanism of cell mediated immunity. | 3 |
| 10 | a. Write down the gross and microscopic features of fibrinous and purulent inflammations. | 6 |
| | b. List the cells may be found in case of granulomatous inflammation. | 1 |
| 11 | a. Name the disease condition produced in weight bearing muscles of calf due to deficiency of vitamin E and/or Selenium. Write down its pathogenesis and pathology. | 4 |
| | b. Write down the pathology of rickets. | 3 |
| 12 | a. Briefly discuss the mechanism of edema. | 4 |
| | b. How will you differentiate hyperemia from congestion microscopically? | 3 |

X

Chittagong Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination, 2012
Subject: Dairy Science (Theory)
Course Code: DSC-202
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. Answer all fragmented parts of a question together).

Section A

1. a) Define colostrums, milk and Dairy Science. 3
b) Write in detail the physico-chemical properties of milk. 5
c) Write the compositions of colostrums, milk and human milk. 3
2. a) What do you mean by "Homogenization" and Standardization"? 4
b) Briefly describe the effect of homogenization of milk. 4
c) If a dairy has 160 kg of 40 percent cream and wishes to standardize it to 32 percent cream, how much skim milk is to be added? 4
3. a) What do you mean by "Pasteurization" of milk? 3
b) Briefly describe the HTST method of pasteurization. 6
c) Do you support the traditional method of cooking milk for dinking? Justify your answer. 3
4. a) Define cheese. Briefly describe the method of preparation of cheddar cheese enumerating the steps involved. 4
b) Briefly describe the methods of dahi preparation. 4
c) State the food value of cheese and dahi. 4

Section B

5. a) What is the importance of feeding colostrums to a newly born calf? 4
b) What are the different methods and forms of feeding colostrums to the young calves? 4
c) "Milk is nearly a perfect food" –comment on this statement. 3
6. a) What is cream? Explain the factors that influence the efficiency of cream separation. 4
b) What advantages does centrifugal separation of cream offer in comparison to gravity method? 4
c) What do you mean by separator slime? Write down the composition of that slime. 4
7. a) Define ghee. Discuss methods of making ghee. Give suggestions for improvement of qualities of ghee. 6
b) List the common defects of ghee. 3
c) Suggest the remedial measures to prevent the development of defects in ghee. 3
8. Write short notes any 3 (three) 3x4= 12
a) Butter and margarine.
b) Ice cream mix
c) Lactoperoxidase system for milk preservation
d) Indigenous dairy products of Bangladesh
e) UHT milk

X

Chittagong Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination/2012
Course Title: Systemic Physiology (Theory)
Course Code: SPH-202 (T)
Full Marks: 70, Time: 3 Hours

(Figures in the right margins indicate full marks. Answer 3 (three) questions from each section of which Question No. 1 and 5 are compulsory. Use separate answer script for each section.)

Section-A

- | | | | |
|---|----|--|---|
| 1 | a. | What is digestion? Write down the importance of digestion. | 3 |
| | b. | Sketch the mechanism of HCL secretion from parietal cell of stomach and describe its mechanism briefly. | 4 |
| | c. | Enlist three different types of enzymes in pancreatic juice and cite their functions. | 4 |
| 2 | a. | Differentiate cortical nephron from juxtra medullary nephron with appropriate diagrams. | 4 |
| | b. | Define glomerular filtration rate. Discuss the factors that affect glomerular filtration rate. | 5 |
| | c. | Write down the definition of uremia, nocturnal enuresis, urolithiasis and renal clearance. | 3 |
| 3 | a. | Define various dead spaces in respiratory process. | 3 |
| | b. | Discuss the mechanism of chloride and reserve chloride shift. | 4 |
| | c. | Give the schematic description of chemical regulation of respiration. | 3 |
| | d. | State the role of carbonic anhydrase in the maintenance of blood pH. | 2 |
| 4 | a. | Briefly describe the chemical regulation in physiological cold response. | 4 |
| | b. | Differentiate between homoeothermic and poikilothermic animals. | 4 |
| | c. | What are the hormonal factors that affect in gaining live weight of an animal? Describe two factors of them. | 4 |

Section-B

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|---|----|---|--------|
| 5 | a. | What is ethology? Write down the normal behaviour of chicken. | 4 |
| | b. | What are the justifications to know behaviour of animal in Veterinary Medicine? List five universal freedoms of animal. | 4 |
| | c. | What is ethogram? How do you recognize a leader in a group of animal? | 3 |
| 6 | a. | Mention the compositional variations among different salivary secretions. | 4 |
| | b. | Describe the functions of different components of gastric juice. | 4 |
| | c. | State the physiological role of colonic microflora. | 4 |
| 7 | a. | Sketch the protein digestion of ruminant animals. | 4 |
| | b. | Discuss the role of micelle and chylomicron in fat absorption. | 4 |
| | c. | Write down a short note on acid-base balance. | 4 |
| 8 | | Write short notes on (any four): | 4×3=12 |
| | a. | Vitamin B ₁₂ absorption | |
| | b. | Physiological benefit of taste sensation | |
| | c. | Esophageal groove | |
| | d. | Nerve deafness | |
| | e. | Grazing behavior of cattle | |
| | f. | Athlete's bradycardia | |