

(Figures in the right margin indicate full marks. Answer **any three (3)** questions from each section of which question number **1 & 5** are compulsory. Use **separate** answer script for each section. Fractions of the questions must be answered together)

**SECTION-A**

1. a) Define toxemia with classification and example 3  
b) What do you mean by drug toxicity? What are the effects of drug toxicity in human and animal body? 4  
c) What are the general principles of diagnosis? Relate proper treatment with proper diagnosis 4
  
2. a) Discuss importance of metabolic and nutritional deficiency in livestock in Bangladesh 3  
b) There are 200 milking cows in a commercial dairy farm and total milk production is 2800 liters/day. Within two weeks milk production reduced to 300 litres/day. As a vet you also observed few cows within the herd have indigestion with loose sticky feces and inappetance. How will you manage the farm? 5  
c) Differentiate between septic and aseptic fever. 4
  
3. a) Differentiate acidosis from frothy bloat. What type of complication may arise in a pregnant cow due to acidosis 6  
b) Write short notes on 2X3= 6  
(i) Stomatitis; (ii) Epistaxis
  
4. a) What is fluid therapy? How will you recognize a dehydrated animal? What are the common causes of dehydration? Write down the management of dehydration. 6  
b) Define and classify photosensitization. Enlist photosensitizing agents with clinical signs, diagnosis and treatment of photosensitization in a cow. 6

**SECTION-B**

5. a) What do you mean by hepatic dysfunction? How will you differentiate different types of jaundice? 3  
b) Mention the indicators you may find in biochemical test of samples from a patient having hepatitis, pancreatitis, and nephritis? 4  
c) List the categories of peritonitis. Write down the diagnostic protocol and line of treatment of peritonitis 4
  
6. a) Write down the principles of diagnosis of respiratory system dysfunction. 4  
b) Enlist the clinical signs that should lead the clinician to suspect pulmonary infection in patient with history of aspiration. 2  
c) Suggest line of treatment of a patient diagnosed with following disorders: 3X2= 6  
(i) Rhinitis; (ii) Bronchopneumonia; (iii) Hemoptysis.
  
7. a) What are the common digestive disorder and their dietary causes in farm animals? 3  
b) Enlist the common therapeutic agents used to treat digestive disorders with at least one trade name of each. 4  
c) Write down the diagnostic protocol and line of treatment of a patient having ruminal engorgement 5
  
8. a) Define clinical medicine. Mention the importance of differential diagnosis in veterinary clinical medicine. 3  
b) What do you mean by pathognomonic clinical sign? 2  
c) Write down the pathognomonic clinical signs of the following disorders: 4X1= 4  
(i) pyelonephritis; (ii) myopathy; (iii) milk fever; (iv) post-parturient hemoglobinuria  
d) What is the significant role of forecasting of diseases in veterinary medicine? 3

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b) Define and classify photosensitization. Enlist photosensitizing agents with clinical signs, diagnosis and treatment of photosensitization in a cow. 6

### SECTION-B

5. a) What are the common metabolic disorders in lactating dairy cows? Why are they considered as metabolic rather than deficiency problems 2  
b) Discuss the stages of clinical abnormalities of a patient suffering from hypocalcemia. 3  
c) Write down the significant clinical manifestations with suggestive treatment of the animals suffering from following deficiencies: 3X2= 6  
(i) Zinc; (ii) iodine; (iii) Copper
  
6. a) Write down the principles of diagnosis of respiratory system dysfunction. 4  
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**Chittagong Veterinary and Animal Sciences University**  
**DVM 3<sup>rd</sup> Year 2<sup>nd</sup> Semester Final Examination-2016**  
**Course Title: Protozoology (Theory)**  
**Course Code: PRT-302 (T)**  
**Full Marks: 35; Time: 2 Hours**

(Figures in the right margin indicate full marks. Answer any three (3) questions from each section and question NO. 5 is compulsory. Use separate answer script for each section.)

**Section-A**

- |    |   |     |
|----|---|-----|
| 1. | a) Enumerate the structures of a protozoa with their function.  | 2.0 |
|    | b) Briefly describe different types of nutrition in protozoa.   | 2.0 |
|    | c) Define Bradyzoite and Tachyzoite.  | 2.0 |
| 2. | a) List the six important zoonotic protozoan parasites.   | 2.0 |
|    | b) "Reservoir host plays an important role in the epidemiology of leishmaniasis" Justify.   | 2.0 |
|    | c) Write down the short note on Surra.  | 2.0 |
| 3. | a) Write down the differences between Cyst and Oocyst of protozoa.  | 3.0 |
|    | b) Name four (04) diarrhoea producing protozoa in animal.   | 1.0 |
|    | c) "Egg of <i>Heterakis gallinarum</i> and earth worm play an important role in the transmission of Black head diseases" – Justify. | 2.0 |
| 4. | a) Enlist the haemoprotozoan parasites of cattle in Bangladesh.   | 1.0 |
|    | b) Sketch the life cycle of Babesia species.  | 3.0 |
|    | c) How can you diagnose bovine babesiosis?  | 2.0 |

**Section-B**

- |    |   |              |
|----|---|--------------|
| 5. | a) Differentiate between syngamy and conjugation.   | 2.0          |
|    | b) Draw and label four development stages of trypanosomes.  | 2.0          |
|    | c) Write the causal agent of Nagana in cattle.  | 1.0          |
| 6. | a) How can you diagnose the following protozoal infections in laboratory (any two):   | 2.5x         |
|    | i) <i>Cryptosporidium bovis</i> ii) <i>Tritrichomonas foetus</i> iii) <i>Anaplasma marginale</i>  | 2=5          |
|    | b) Define Ookinete with example.  | 1.0          |
| 7. | a) Name three (3) protozoa that causes abortion in animal.  | 2.0          |
|    | b) "Cat plays an important role in the epidemiology of toxoplasmosis"- Justify.   | 2.0          |
|    | c) State the public health importance of toxoplasmosis.   | 2.0          |
| 8. | a) Write down ,in tabular form, the intermediate hosts/Vectors (if applicable), final hosts, locations and infective stages of the following protozoa:- | 0.5x<br>10=5 |
|    | i) <i>Entamoeba invadens</i> ii) <i>Giardia canis</i> iii) <i>Trypanosoma congolense</i>  |              |
|    | iv) <i>Eimeria truncata</i> v) <i>Sarcocystis bovifelis</i> vi) <i>Ehrlichia canis</i>  |              |
|    | vii) <i>Theileria hirci</i> viii) <i>Plasmodium knowlesi</i>  |              |
|    | ix) <i>Haemoproteus comlumbae</i> x) <i>Leucocytozoon smithi</i>  |              |
|    | b) Differentiate vesicular and compact type of nuclei.  | 1.0          |

Chittagong Veterinary and Animal Sciences University  
DVM 3<sup>rd</sup> Year 2<sup>nd</sup> Semester Final Examination-2016  
**Course Title: Pathology of Infectious Diseases**  
Course Code: PID - 302  
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) How a tubercle nodule is formed? What is called pearly disease?                         | 2.0 |
|    | b) Describe pathogenesis and pathology of rinder pest in cattle.                           | 5.0 |
| 2. | a) List in diseases where vesicles are formed.   | 3.0 |
|    | b) Describe briefly the transmission and pathology of FMD in cattle.                       | 4.0 |
| 3. | a) What do you mean by septicemic disease? Enlist five septicemic diseases.                | 2.0 |
|    | b) Describe briefly the pathogenesis and pathology of Black leg in cattle.                 | 5.0 |
| 4. | a) List five blood protozoa in cattle.   | 1.0 |
|    | b) Write down the pathogenesis of babesiosis.  | 4.0 |
|    | c) How can you differentiate babesiosis from anaplasmosis?                                 | 2.0 |
| 5. | a) List five vertically transmitted diseases.  | 2.0 |
|    | b) Write down the pathology and mechanism of abortion caused by <i>Brucella</i> organisms. | 5.0 |
| 6. | a) Enlist the diarrhoeal diseases in calf.   | 1.0 |
|    | b) Write down the microscopic lesions of the following diseases (any three): 2x3=          | 6.0 |
|    | (i) Actinomycosis; (ii) Ring worm; (iii) Verminous pneumonia; (iv) Canine distemper        |     |

### SECTION-B

- |     |  |     |
|-----|--|-----|
| 7.  | a) What do you mean by incubation period and inclusion body?   | 3.0 |
|     | b) Describe the factors which can influence the pathogenesis of infectious diseases.   | 4.0 |
| 8.  | Name the most important bacterial diseases which can be transmitted to human from cow through milk. Write down its epidemiology, pathology and pathogenesis. | 7.0 |
| 9.  | a) Define prion. Name five diseases produced by prion in man and animals.  | 2.0 |
|     | b) What type of lesions is produced in brain of cattle by prion?   | 2.0 |
|     | c) Write short notes on papillomatosis.  | 3.0 |
| 10. | Write down the pathology of the following diseases (any two): (3.5x2)=   | 7.0 |
|     | i) Infections canine hepatitis; ii) Rabies; iii) Tuberculosis  |     |
| 11. | a) How <i>Haemonchus contortus</i> produce anemia in a heifer?   | 2.0 |
|     | b) How a nodule is formed in case of nodule worm diseases in cattle?   | 3.0 |
|     | c) What do you mean by pipe stem liver?  | 2.0 |
| 12. | a) Write down the pathogenesis and pathology of anthrax.   | 4.0 |
|     | b) State the pathogenesis of tetanus in a recently castrated kid.  | 3.0 |

(Figures in the right margin indicate full marks. Answer **any Three (3) questions** from each section of which question no **1 and 5** are compulsory. Use separate answer script for each section. Split answers are highly discouraged )

**SECTION-A**

1. a) State the conceptions of Dairy Science, Dairy Technology and Dairy Industry. 3.0  
b) How will you go for selecting a suitable breed for dairy production in a tropical country? 4.0  
c) State the milk-pricing system in a dairy industry. 4.0
2. a) Describe the chemical properties of milk. 5.0  
b) Differentiate milk from market milk. Describe the states of different milk constituents in milk. 4.0  
c) Why is the cooling of milk necessary at different levels during production, keeping and processing? 3.0
3. a) State the conception of cream with its types. Briefly discuss the principle(s) of cream separation. 4.0  
b) Explain over-run in butter and ice-cream. 3.0  
c) How many kg of 28% cream and 03% milk will be required to make 500 kg of a mixture testing 04% fat? 5.0
4. Write short notes on any three (3) of the followings: 3×4= **12.0**  
a) Factors affecting the loss of fat in skim milk during cream separation; b) Stabilizer and Emulsifier; c) Cheddar Cheese; d) Byre shed management; and e) Spray-drying method for FCMP.

**SECTION-B**

5. a) List the methods of pasteurization with merits and demerits. 3.0  
b) Briefly describe HTST pasteurization with neat diagram. 4.0  
c) Write a short note on CIP of a pasteurizer. 4.0
6. a) What do you mean by "Frozen Dairy Products"? Classify them. 4.0  
b) Write down the steps of ice-cream making. 5.0  
c) How do you like to differentiate Condensed milk from Evaporated milk? 3.0
7. a) Compare yoghurt, cultured butter milk and cultured whey. 3.0  
b) Briefly state the manufacturing procedure of commercial yoghurt. 4.0  
c) Illustrate the common defects of cheese with their causes and prevention. 5.0
8. Write short notes on any three (3) of the followings: 3×4= **12.0**  
a) Preparation of ghee from cream; b) Comfort housing in commercial dairy farm;  
b) Principles of cheese making; d) Neutralization of butter; and e) Dried milks.

Chittagong Veterinary and Animal Sciences University  
DVM 3<sup>rd</sup> Year 2<sup>nd</sup> Semester Final Examination-2016  
**Course Title: Livestock Economics and Marketing (Theory)**  
Course Code: LEM-302  
Full Marks: 70; Time: 3 Hours

(Figures in the right margin indicate full marks. Answer **any Four (4) questions** from each section. Where question no **1 and 6** are compulsory. Use **separate** answer script for each section. Fractions of the questions must be answered together)

**SECTION-A**

- |    |    |  |     |
|----|----|--|-----|
| 1. | a) | Describe the role of livestock economics in Bangladesh.  | 4.0 |
|    | b) | State and graphically explain the law of demand.   | 4.0 |
| 2. | a) | What do you mean by production and production function.  | 3.0 |
|    | b) | Why stage II is called the stage of operation.   | 6.0 |
| 3. | a) | What is national income? Distinguish between the term GDP & GNP.                                   | 4.0 |
|    | b) | Discuss the production method of measuring national income in a country with its limitation.       | 5.0 |
| 4. | a) | Define division of labour. Briefly discuss the advantages and disadvantages of division of labour. | 4.0 |
|    | b) | State and discuss the function of money.   | 5.0 |
| 5. |    | Briefly explain the following concepts.  |     |
|    | a) | Total utility and marginal utility.  | 2.5 |
|    | b) | Supply and supply function.  | 2.5 |
|    | c) | Average cost and marginal cost.  | 2.0 |
|    | d) | Financial analysis and economic analysis of livestock project.                                     | 2.0 |

**SECTION-B**

- |     |    |  |     |
|-----|----|--|-----|
| 6.  | a) | Name the livestock products available in Bangladesh. Show the importance of livestock products.  | 5.0 |
|     | b) | “Marketing is a process by which companies create value for customers and build strong customer relationships to capture value from customers in return”-Explain the definition with examples. | 3.0 |
| 7.  | a) | Does marketing add value? Justify your answer.   | 3.0 |
|     | b) | Identify the functions of marketing.   | 3.0 |
|     | c) | Identify and give examples of utilities.   | 3.0 |
| 8.  | a) | Hypothetically select one company or organization of yours choice. Show the 7P’s of that company or organization.  | 6.0 |
|     | b) | Give examples of need, want and demand.  | 3.0 |
| 9.  | a) | Suppose you are going to start a dairy farm in Chittagong. Predict some market risks for your farm product.  | 3.0 |
|     | b) | Propose your recommendations for future policy direction after discussing the challenges of the poultry industry.  | 6.0 |
| 10. |    | Suppose you are working for marketing of Bengal meat’s “Beef”  |     |
|     | a) | Propose some ideas on how to increase the value of your product for the premium customers.   | 4.0 |
|     | b) | Develop a chain to distribute your products to those customers.  | 5.0 |

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### SECTION-A

- 1 a) Briefly describe how the exogenous and endogenous antigens are presented and processed by host immune system. 6.0  
b) Explain the term antigen, immunogen and epitope. 3.0
2. a) Enlist the differential points between cell mediated and humoral immune response. 4.0  
b) Distinguish among different lymphoid organ 5.0
3. a) Write down the properties of ideal vaccine. 2.0  
b) Mention the merits and demerits of live vaccine 3.0  
c) Deduce attenuation process of microorganism 4.0

### SECTION-B

4. a) Mention the production process of monoclonal antibody. 04  
b) Enlist the properties of cytokine. 04
- 5 a) Mention the basis hypersensitivity. 2.0  
b) Differentiate Arthus reaction from allergy. 3.0  
c) Characterize delayed type of hypersensitivity. 4.0
6. a) Draw papain and pepsin fragment of Ig. 04  
b) Differentiate different class of immunoglobulin. 05



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### SECTION-A

1. a) What do you mean by veterinary toxicology? Briefly discuss the different areas of toxicology. 3.0
- b) What are the factors altering the action of poisons in the animal body? 3.0
- c) Discuss the different steps of circumstantial evidence which may be helpful for the diagnosis of a suspected poisoning case in livestock. 5.0
2. a) How will you differentiate organophosphorus from organocarbamate poisoning? 4.0
- b) How will you diagnose and treat DDT poisoning in cattle? 4.0
- c) Enlist plants producing lathyrism. Explain lathyrism in horse. 4.0
3. a) How will you diagnose and treat cyanide poisoning in cow. 4.0
- b) Make a list of poisonous plant with active principle (any six). 3.0
- c) "Secondary photosensitization is important in livestock"- briefly discuss the statement with possible line of treatment. 5.0
4. a) How will you diagnose and treat acute arsenic poisoning in cattle. 4.0
- b) What are the relationship between copper and molybdenum intoxication? How will you prevent such poisoning? 4.0
- c) Write the mechanism of formation of methaemoglobin and carboxyhemoglobin in nitrite and carbonmonoxide poisoning, respectively. 4.0

### SECTION-B

5. a) How will you diagnose and treat aflatoxicosis in poultry. 4.0
- b) What is chelation? Give examples of two chelating agents with their dose and indications. 3.0
- c) How could you prevent arsenic poisoning of human and animals from environmental contamination at present context of Bangladesh? 4.0
6. a) Enlist plants causing teratogenic effects in livestock. 2.0
- b) How will you diagnose and treat nitrate poisoning in cattle? 4.0
- c) Animal shows hypothermia, profuse watery salivation falling with drop by drop and meiosis. If it is a poisoning case diagnose the above condition with mode of action and line of treatment. 6.0
7. a) Write down the diagnosis and treatment of urea poisoning in a cow. 4.0
- b) What is food toxicant? Briefly describe the food toxicants. 4.0
- c) "Drug residues in animal body are public health hazard"- briefly discuss the statement. 4.0
8. Write short note any four of the followings. 4×3=12
  - a) Biotransformation of poisoning
  - b) Universal antidote
  - c) Radiation hazard
  - d) Taratodotoxins
  - e) Ergot poisoning