

**Chittagong Veterinary and Animal Sciences University**  
**DVM 3<sup>rd</sup> year 1<sup>st</sup> Semester Final Examination-2018**  
**Course Title: Large Animal Production (Theory)**  
**Course Code: LAP-301(T)**  
**Full Marks: 70, Time: 3 Hours**

(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.)

**Section-A**

1. a). a) List the point to increase the breeding efficiency of a dairy herd. 3.0
- b). Show the structure of udder. Write down the milk let-down mechanism with proper diagram 3.0
- c). Mention the desirable traits of a dairy cow. What are the methods for proper milking? 5.0
  
2. a). State briefly the historical background and domestication of buffaloes. 3.0
- b). Buffalo rearing is superior to cattle—justify this. 3.0
- c). How does buffalo utilize the poor quality roughage more efficiently than the cattle? 3.0
- d). Write down the sexual behaviour of buffalo bull and cow during parturition 3.0
  
3. a). Classify the beef cattle breeds on the basis of origin. 3.0
- b). Discuss briefly the origin, distribution, body characteristics and utilities of Brahama cattle. 3.0
- c). What are the points you would consider before starting a beef fattening business? 3.0
- d). Discuss the potentials and challenges of beef cattle industry in Bangladesh. 3.0
  
4. Write short note **any four** of the followings- 4×3=12
  - a) Colostrum feeding
  - b) Mastitis
  - c) Effect of climate on buffalo production
  - d) ONBS
  - e) Silent heat
  - f) Common diseases of milch cows

**Section-B**

5. a). 'Dairy cow is a machine' - justify this. 3.0
- b). Write down the heifer management system of dairy farming. 4.0
- c). State the calf feeding schedule from birth to six months of age. 4.0
  
6. a). Mention the key reproductive features of buffalo. 3.0
- b). Describe the care and management of buffalo breeding bull. 5.0
- c). What are the problems that a farmer would face during intensive buffalo production with respect to reproduction and feeding? 4.0
  
7. a). What are the main feeding problems of draft cattle in tropics? 3.0
- b). How would you train newly purchased bullock pair for tillage purpose? 5.0
- c). Briefly describe the housing system for your purchased bullock pair. 4.0
  
8. a). Sketch the udder development of a cow up to the age of puberty. 3.0
- b). How would you nurse a new-born calf after dying dam during parturition, when you have no any foster mother available at your farm, which could have provided colostrum to the new-born. 5.0
- c). What are the daily routine check-up and care that you should take of your milking herd for successful farming? 4.0

# Chittagong Veterinary and Animal Sciences University

DVM 3<sup>rd</sup> year 1<sup>st</sup> Semester Final Examination-2018

Course Title: Pharmacology and Therapeutics (Theory)

Course Code: PHT-301(T)

Full Marks: 70, Time: 3 Hours

(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. Fractions of the questions must be answered together)

## SECTION-A

- 1 a) Define drug with classification. What are the rational use of drug? 3  
b) Differentiate herbal drugs with chemotherapeutics. Mention the characteristics of alkaloid and glycosides. 4  
c) Define immune-pharmacology. Explain recombinant DNA technology. Make a vaccination schedule for dog and cat. 4
- 2 a) Define autacoids. How does autacoid differ from hormone? Name five important drugs that can cause release of histamine. 4  
b) Mention the indications of H<sub>1</sub> receptors and H<sub>2</sub> receptors antagonists. How do H<sub>1</sub> and H<sub>2</sub> blockers differ from each others? 4  
c) What is NSAIDs? Name NSAIDs with less GIT irritation. 4
- 3 a) Describe the antihistaminic drug with mentioning the pregnancy safe and contraindicate antihistaminic drug. 3  
b) Briefly describe about the rationale use of corticosteroid drug in Livestock. 3  
c) Write down the name of some commercially available drug used for ecto-parasitic infection. 3  
d) Explain Fenbendazole are effective against both endo-parasitic infection and protozoal infection. 3
- 4 a) Write down the properties, mode of action, indication and adverse effect of tetracycline. 4  
b) Enlist antibiotics which are better effective in empty stomach and with food. 4  
c) Suppose a dog admitted with history of high fever. On clinical examination lymph nodes were found swollen and tick are also present. What is your diagnosis and which treatment protocol you chosen? 4

## SECTION-B

- 5 a) Classify endocrine drug. Mention the endocrine drug that are used for repeat breeder cow and cystic ovarian disease with specific dose regimen. 4  
b) Mention some NSAIDs that are used specifically for musculoskeletal pain and visceral pain. Write down the mode of action of ketoprofen. 4  
c) A female goat of 2 years old suffering from hepatitis. Mention two antibiotics that are not suitable for the patient with specific reason. 3
- 6 a) Point out the common properties of macrolides. Write down the mode of action, Pharmacokinetic properties and adverse effects of macrolide. 4  
b) Mention all the name of quinolone group of drug according to its specific generation. Why that group of antibiotic are contraindicated in young puppies? 4  
c) Mention some antibiotics which increase SGPT and bilirubin. Which are the safe antibiotic in renal failure, neonate and pregnant cow? 4
- 7 a) What do you mean by AMR and drug residue? How bacteria develop resistance to streptomycin? 4  
b) Do you know about AWaRe? Why chloramphenicol and nitrofurantoin are detrimental for human health. 4  
c) A 2 years old black Bengal goat brought with a history of dyspnea, coughing and diarrhea for last 3 days. What will be diagnosis and write a prescription with proper advice. 4
- 8 Write short notes on (any four) 4x3=12  
a) Potentiated sulphonamides  
b) Chemoprophylaxis  
c) Thrombo-embolic drug  
d) Oxygen therapy  
e) Colistin

**Chittagong Veterinary and Animal Sciences University**  
**DVM 3<sup>rd</sup> year 1<sup>st</sup> Semester Final Examination-2018**  
**Course Title: Systemic Pathology (Theory)**  
**Course Code: SPT-301(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.)

**SECTION-A**

- |    |   |   |
|----|---|---|
| 1. | a) Define stomatitis. Write down the causes of stomatitis in animals.   | 3 |
|    | b) Classify enteritis. Describe different types of enteritis.   | 4 |
| 2. | a) Differentiate pneumonia from pneumonitis.  | 2 |
|    | b) Write short note on pulmonary adenomatosis.  | 2 |
|    | c) Describe the pathogenesis of roaring in horse.   | 3 |
| 3. | a) Differentiate myositis from myopathy.  | 2 |
|    | b) Write down the pathology and pathogenesis of equine rhabdomyolysis.  | 3 |
|    | c) Describe the pathogenesis of renal rickets.  | 2 |
| 4. | a) What are the cysts commonly seen in the ovary of animals? How will you differentiate follicular cyst from luteal cyst. | 3 |
|    | b) Enlist infectious causes of abortion in cows.  | 2 |
|    | c) What do you mean by cryptorchidism?  | 2 |
| 5. | a) Differentiate diabetes mellitus from diabetes insipidus.   | 3 |
|    | b) Write down the causes and pathogenesis of simple goiter.   | 4 |
| 6. | a) Define and classify heart failure.   | 2 |
|    | b) Write down the pathogenesis of left sided heart failure.   | 3 |
|    | c) Describe valvular and mural endocarditis.  | 2 |

**SECTION-B**

- |     |   |   |
|-----|---|---|
| 7.  | a) Write down the pathological conditions of bone marrow.   | 2 |
|     | b) What are the microscopic features of anemic blood smear?                                       | 3 |
|     | c) Write down the causes of hemolytic anemia.   | 2 |
| 8.  | a) Define bloat. Write down its pathogenesis.   | 2 |
|     | b) What is cirrhosis? Enlist the causes of cirrhosis.   | 2 |
|     | c) Sketch the pathogenesis of ruminal acidosis.   | 3 |
| 9.  | a) What is compensated heart disease?   | 2 |
|     | b) Describe shaggy heart.   | 3 |
|     | c) List the congenital defects of cardiovascular system.  | 2 |
| 10. | a) Define and classify pyelonephritis.  | 2 |
|     | b) Why male castrated goats are more susceptible to urolithiasis than intact male goats? Explain. | 3 |
|     | c) What is astrocytosis and gitter cell?  | 2 |
| 11. | a) What is freemartinism?   | 2 |
|     | b) Describe the developmental anomalies of penis and prepuce.                                     | 3 |
|     | c) Define repeat breeding.  | 2 |
| 12. | a) Differentiate osteopetrosis from osteoporosis.   | 2 |
|     | b) Write down the pathology and pathogenesis of rickets in a calf.                                | 3 |
|     | c) Define parakeratosis, acanthosis and urticaria.  | 2 |

Chittagong Veterinary and Animal Sciences University

DVM 3<sup>rd</sup> year 1<sup>st</sup> Semester Final Examination-2018

Course Title: Veterinary Entomology (Theory)

Course Code: VEN-301(T)

Full Marks: 35, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer any Three (3) questions from each section.  
Question no. 5 is compulsory. Use separate answer script for each section.)

SECTION-A

1. a) Write the characteristics of arthropod parasites. Why are they important in the field of Veterinary Medicine? 2.0  
b) Differentiate between Anoplura and Mallophaga. How do they harm the host? What practical measures would you take to control these infestation from a farm? 4.0
2. a) Give the morphological features of adult mosquito and differentiate *Anopheles* from *Culex*. 3.0  
b) Mention the morphology, life cycle and pathogenic effects of *Gastrophillus*. 3.0
3. a) Show the morphological differences between ticks and mites. 3.0  
b) Describe the morphology of horsefly and mention its importance as diseases transmitter. 3.0
- 4 Write short notes on: (Any two) 3x2=6  
a) Metamorphosis.  
b) Red mite of poultry.  
c) Tick toxicosis

SECTION-B

5. a) Briefly describe the morphology and biology of a typical three host tick. 2.0  
b) Write down scientific names of the following insects: (any six) 0.5x6=3
  - 1) One host tick
  - 2) Scaly leg mite of poultry
  - 3) Pigeon louse
  - 4) Sheep ked
  - 5) CIGER shaped mite
  - 6) Long nosed louse
  - 7) Sheep nasal bot fly
  - 8) Horse throat bot fly
6. a) What is myiasis and strike? Mention risk factors and control of myiasis. 2.0  
b) Mention the vectors of the following diseases/ agents: (any eight) 0.5x8=4
  - i) Hog cholera
  - ii) Chikungunya virus
  - iii) River blindness/Onchocereosis
  - iv) Sura
  - v) Habronemiasis
  - vi) Dengue
  - vii) Eleptantiasis
  - viii) Leishmaniasis/Kalaazor
  - ix) Anthrax
  - x) Dourine
  - xi) *Salmonella*
  - xii) *Shigella*
7. a) Differentiate morphologically (any 3) 3x2=6
  - 1) Hard tick from soft tick
  - 2) Burrowing from non-burrowing mites
  - 3) Male hard tick from female hard tick
  - 4) Psoroptes from Chorioptes
8. a) What do you mean by the term "Diptera"? Describe the important morphological features of the order Diptera. 2.0  
b) Describe feeding mechanism of Nematoceran and Brachyceran flies. 2.0  
c) Mention the life cycle and pathogenic significance of warble fly. 2.0

Chittagong Veterinary and Animal Sciences University

DVM 3<sup>rd</sup> year 1<sup>st</sup> Semester Final Examination-2018

Course Title: Dairy Microbiology (Theory)

Course Code: DMC-301(T)

Full Marks: 35, Time: 2 Hours

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

**SECTION-A**

1. a) What do you mean by Dairy Microbiology? Write down the importance of Dairy Microbiology. 2.0
- b) Classify Lactobacteriaceae family with example. 3.0
- c) Briefly describe the importance of lactic acid bacteria? 1.0
2. a) Define dairy starter culture with examples. 1.0
- b) Give flow chart of culture preparation. 2.0
- c) Enlist the common culture defects. 1.0
- d) What are the bacterial cultures used in fermented milk product manufacturing process? 2.0
3. a) Define milk-borne disease with classification. 1.5
- b) State the cause, sign, symptoms, prevention and control of Tuberculosis. 3.0
- c) How to prevent milk-borne infectious diseases? 1.5
4. Write short notes (any 3) 3×2=6
- a) Microbiology of Butter
- b) Microbiological standards of Grade-A milk and milk products.
- c) Microbiology of Cream or Dahi
- d) Milk hygiene
- e) Proteolysis

**SECTION-B**

5. a) What do you mean by the undesirable fermentation of milk? 1.0
- b) What are the various sources of contamination of milk and milk products? Briefly describe with schematic diagram. 2.5
- c) Illustrate the physical and chemical agent used for destruction of microorganism in dairy microbiology. 1.5
6. a) Define Thermotolerant bacteria with examples. 1.0
- b) Write down the sources and significance of Thermotolerant bacteria in milk and milk products. 3.0
- c) Write down the effect of Thermotolerant bacteria on self-life of milk at room temperature in Bangladesh. 2.0
7. a) Define Probiotics with example. 1.0
- b) Briefly describe the health benefits of Probiotics. 3.0
- c) What is the significance of Coliform bacteria in milk and milk products? 2.0
8. a) What is HACCP? 1.0
- b) State the principles of HACCP. 2.0
- c) Illustrate the HACCP description chart for fluid milk. 3.0

**Chittagong Veterinary and  
Animal Sciences University**  
**DVM 3<sup>rd</sup> year 1<sup>st</sup> Semester Final Examination-2018**  
**Course Title: Virology (Theory)**  
**Course Code: -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. Mention the contributions of following scientists in the field of virology: 1X7=7
  - a) Loius Pasteur
  - b) Edward Jenner
  - c) Iwanoski
  - d) Montagnier
  - e) Prusiner
  - f) Rous
  - f) Stanley
  
2. a) Write down the physico-chemical properties of avian influenza virus, PPR virus and feline pan leucopenia virus. 2.0+2.0=4  
 Enlist the samples to be collected in each case to diagnose in laboratory.
  - b) Name 3 vertical and 3 horizontal transmitted viral disease of poultry. 3.0
  
3. a) Write down the scope of virology. 4.0
  - b) Name 3 DNA and 3 RNA viruses of animals and birds with their disease names. 3.0
  
- 4 Briefly describe process of virus purification. 7.0
  
- 5 a Write the basis of modern viral classification. 2.0
  - b Explain DNA virus replication process. 5.0
  
- 6 Explain physico-chemical properties of Retroviridae and Rhabdoviridae family viruses. 7.0

**SECTION-B**

7. List of viral disease of chicken with mentioning family, nucleic acid, strandness, symmetry, sense, envelop/ naked, segmented / unsegmented in a tabular form. 7.0
  
8. a) Appraise pathogenic characterization of NDV 7.0
  
9. a) Explain OIE criteria of HPAIV. 3.0
  - b) Mention the role of different segments of AIV. 4.0
  
- 10 Mention the lesions produced in egg embryo during propagating following virus: AIV, duck plague virus, infectious bronchitis virus, ILTV. 7.0
  
- 11 a Write down the role of different virus capsid protein in case of IBDV. 3.0
  - b Maternal antibody plays a critical role in vaccination of IBDV-Explain 4.0
  
- 12 Explain physico-chemical properties of viruses belonging to Poxviridae and Herpesviridae family. 7.0

**Chittagong Veterinary and Animal Sciences University**  
**DVM 3<sup>rd</sup> year 1<sup>st</sup> Semester Final Examination-2018**  
**Course Title: Animal Breeding (Theory)**  
**Course Code: ABR-301(T)**  
**Full Marks: 35, Time: 2 Hours**

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

**Section-A**

1. a). Explain the term phenetic variance. Partition the total phenotypic variance into its components. 2
- b). What is breeding value? Additive genetic variance is more important and effective than other genetic variance components-Justify? 3
2. a). What do you mean by inbreeding depression? Write down its effects on poultry population. 2
- b). State Hardy-Weinberg law of equilibrium. Prove Hardy-Weinberg law in consideration of a hypothetical population. 3
- c). Mention the application of Hardy-Weinberg law of equilibrium in molecular genetics. 1
3. a). Distinguish between selection and culling. Write down the objective of selection. 1
- b). Why is selection index the best method among the other methods of selection? Justify. 1
- c). Construct selection index using the selection criteria under the breeding objective to increase meat production from beef cattle. 4
4. a). Distinguish between heritability and repeatability. Write down the classification of heritability value with examples. 2
- b). Write in detail, how will you estimate the heritability values for egg production in poultry? 4

**Section-B**

5. a). Explain the term Animal Breeding and breeding value of a trait. 1
- b). Who was Robert Bakewell? Narrate how he derived the three basic principles in animal improvement from his animal breeding experiment. 4
- c). State the consequences of domestication of animals. 1
6. a). Explain population, idealized population and effective population size. 2
- b). Describe how will you develop a broiler strain using breeding strategies. 4
7. a). What is cross breeding? Write down its advantages and disadvantages in dairy cattle development. 3
- b). What do you mean by the term "response to selection"? Mention the factors that are responsible for selection response. 3
8. a). State the cattle breeding policy of Bangladesh. Indicate its merits and demerits. 2
- b). How will you up-grade indigenous cow of Bangladesh for milk production? State its limitation. 2
- c). Write down the progeny testing breeding scheme for selecting an elite bull for milk production. 2

**Chittagong Veterinary and Animal Sciences University**  
**DVM 3<sup>rd</sup> year 1<sup>st</sup> Semester Final Examination-2018**  
**Course Title: Fundamental of Clinical Medicine (Theory)**  
**Course Code: FCM-301(T)**  
**Full Marks: 35, Time: 2 Hours**

(Figures in the right margin indicate full marks. Answer any **two (2)** questions from each section of which question **no.1** is compulsory. Use separate answer script for each section. Fractions of the questions must be answered together)

**SECTION-A**

- |   |   |   |
|---|---|---|
| 1 | a) What are the vital signs of an animal? How can you measure them in a dog patient?                | 4 |
|   | b) Write down the topographic location of lung, heart, stomach, kidney, liver and spleen of a goat. | 4 |
| 2 | a) Define diagnosis and prognosis.  | 2 |
|   | b) Classify diagnosis with examples.  | 4 |
|   | c) What are the differences between therapeutics and prophylaxis?                                   | 3 |
| 3 | a) How can you diagnose reticular pain in cattle at field condition? Describe any two of them.      | 3 |
|   | b) How can you assess dehydration in an animal?   | 3 |
|   | c) Write down the procedure and indications of esophageal probing in a cow.                         | 3 |

**SECTION-B**

- |   |  |   |
|---|--|---|
| 4 | a) Define clinical sign, lesion, anamnesis, snap-shot diagnosis, mania, dunny syndrome, obesity and cachexia.                  | 3 |
|   | b) Describe the 'Key abnormality method' of diagnosis.   | 3 |
|   | c) Classify diseases according to 'clinical manifestation' and 'intensity and spread'.   | 3 |
| 5 | a) What are the principles of restraining of animal? Write down the restraining methods commonly practiced in <del>dog</del> . | 4 |
|   | b) Write down the palpation and percussion findings.   | 3 |
|   | c) Name the lung sounds with interpretations.  | 2 |
| 6 | a) What is clinical management of diseases?  | 2 |
|   | b) Define clinic, clinical medicine and clinical propaedeutic.   | 3 |
|   | c) What are the typical work activities of a veterinarian.   | 4 |



**Chittagong Veterinary and Animal Sciences University**  
**DVM 3<sup>rd</sup> year 1<sup>st</sup> Semester Final Examination-2018**  
**Course Title: Breeder and Hatchery Management (Theory)**  
**Course Code: BHM-301(T)**  
**Full Marks: 35, Time: 2 Hours**

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

**SECTION-A**

1. a) Define grandparent stock, parent stock and hybrid. 1.5  
b) Discuss the cock management system in a breeding flock. 2.5  
c) Distinguish between broiler and layer parents stock. 1.0
2. a) What is selection? Mention the selection criteria for breeder stock? 3.0  
b) Mention the importance and measuring system of uniformity in a breeding flock. 3.0
3. a) Mention the incubation period of chicken, pigeon, duck, quail, ostrich, turkey, goose and peafowl. 1.5  
b) Define fertility, hatchability, pause and clutch. 1.5  
c) State the factors that affect fertility and hatchability of eggs. 3.0
4. Short note: (Any six of the following) 6×1=6
  - a) Broodiness
  - b) Spiking
  - c) Traits of pure line
  - d) SSF
  - e) Egg candling
  - f) Peck order
  - g) Cannibalism
  - h) Rice-husk incubator

**SECTION-B**

5. a) State the challenge and phase feeding systems of breeder stock. 2.0  
b) Distinguish between qualitative and qualitative traits of breeder stock. 2.0  
c) Explain reciprocal recurrent selection for breeder. 2.0
6. a) What is quality chick? How would you evaluate them? 2.0  
b) What factors would you consider for setting up a hatchery? 2.0  
c) What is fumigation? State the steps for commercial hatchery operation. 2.0
7. a) Define incubator. Distinguish between natural and artificial incubator. 2.5  
b) Calculate the body weight of younglings of different poultry species. 2.0  
c) Distinguish between blastoderm and blastodisc. 1.5
8. a) Mention the favorable traits of local chicken. 2.0  
b) State the mechanism with which you can improve local chicken breed. 2.5  
c) Sketch the breeding strategy for modern chickens. 1.5

**Chittagong Veterinary and Animal Sciences University**  
**DVM 3<sup>rd</sup> Year 1<sup>st</sup> Semester Final Examination-2017**  
**Course Title: Fundamental of Clinical Medicine (Theory)**  
**Course Code: FCM-301 (T)**  
**Full Marks: 35; Time: 2 Hours**

(Figures in the right margin indicate full marks. **Answer two questions** from each section of which question no **1 is compulsory**. Use separate answer scripts for each section. Fractions of the question must be answered together)

**Section-A**

1. a) Define anamnesis. Classify it. Briefly explain the way of asking questions while taking the clinical history. 3.0
- b) Enlist the recommended supplies for conducting physical examination of an animal. 2.0
- c) Write down the clinical manifestations of diseases. 3.0
  
2. a) Enumerate the key abnormality methods for making diagnosis of diseases. 2.0
- b) What are the sites of mucous membrane examination? Interpret the changes of the color of mucus membrane with exact causes. 3.0
- c) What do you mean by vital signs? How will you measure the important vital signs from animals? 4.0
  
3. a) Write down the anatomical location for following physical examination. 0.5×4=02
  - (i) Rumen motility test
  - (ii) Auscultation of lungs
  - (iii) Skin fold test
  - (iv) Palpation of superficial lymphnode
- b) Write down the clinical and para-clinical examination of the following organs or system. 4×1=4
  - (i) Reticulum
  - (ii) Muscular-skeletal system
  - (iii) Liver
  - (iv) Eye
- c) Define clinical restraining. Enumerate one method of restraining of each of the following species. 3×1=3
  - (i) Cattle
  - (ii) Horse
  - (iii) Dog

**Section-B**

4. a) What do you mean by clinical management of an individual animal? What would be your advice for following diseases? 3X1=3
  - (i) Aspiration pneumonia
  - (ii) Acidosis
  - (iii) Traumatic reticuloperitonitis
- b) Differentiate among hunger, inappetance and anorexia. 3.0
- c) Briefly explain the method of diagnosis of pain, dehydration, malnutrition and deafness through physical examination. 3.0
  
5. a) A 4 years old high yielding cow brought to SAQTVH with complain of inappetance distended abdomen, diarrhea, and dehydration. 3×2=6
  - (i) What physical examination would you do for the diagnosis of this patient?
  - (ii) What samples would you collect and what paraclinical procedures would you recommend for it?
  - (iii) How would you interpret all findings for the diagnosis of this patient?
- b) What do you mean by capillary refill time? Briefly explain the findings you may get from palpation and percussion of an organ or tissue. 3.0
  
6. a) What are the differences between percussion and auscultation technique? 1.0
- b) How will you differentiate fever from hyperthermia? 2.0
- c) What are the different methods of restraining? Describe briefly. 6.0

**Chittagong Veterinary and Animal Sciences University**  
**DVM 3<sup>rd</sup> Year 1<sup>st</sup> Semester Final Examination 2016**  
**Course Title: Breeder and Hatchery Management (Theory)**  
**Course Code: BHM-301**  
**Full Marks: 35; Time: 2 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 grandparent stock, parent stock and hybrid. 1.5  
b) Discuss the cock management system in a breeding flock. 2.5  
c) Distinguish between broiler breeding parent stock and layer breeding parent stock. 1.0
2. a) What is control feeding program? How would you maintain control feeding program in a breeder flock? 4.0  
b) State the phase feeding and challenge feeding systems in poultry. 2.0
3. a) What is selection? Mention the selection criteria of breeding stock? 3.0  
b) Mention the importance and measuring system of uniformity in a breeding flock. 3.0
4. Write short note (**any four**) (1.5×4)=6.0
  - a) Nest box;
  - b) Precocity;
  - c) Spiking;
  - d) Sexually Separate Feeding (SSF);
  - e) Rearing system of breeding flock; and
  - f) "Taking off" hatch

**Section-B**

5. a) Mention the incubation period of chicken, pigeon, duck, quail, ostrich, turkey, goose and peafowl. 1.5  
b) Define fertility, hatchability, pause and clutch. 1.5  
c) State the factors that affect fertility and hatchability of eggs. 3.0
6. a) What is quality chick? How would you evaluate them? 2.0  
b) What factors would you consider for setting up a hatchery? 2.0  
c) What is fumigation? State the fumigation procedures for hatching eggs. 2.0
7. a) Briefly discuss the embryonic development of hatching egg. 3.0  
b) Mention the steps of hatching duck eggs by rice husk incubation method. 3.0
8. Write short note (**any three**) 2.0×3=6.0
  - a) Sexing day old chicks;
  - b) Natural incubation;
  - c) Stocking density;
  - d) Balut;
  - e) Bio-security; and
  - f) Pure line

**Chittagong Veterinary and Animal Sciences University**  
**DVM 3rd Year 1<sup>st</sup> Semester Final Examination 2016**  
**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 **three** questions from each section of which **question nos 1 and 5 are compulsory**. Use separate answer scripts for each section)

### Section-A

- |    |    |  |     |
|----|----|--|-----|
| 1. | a. | Define animal genetics, gene, genome and phenotype.  | 3.0 |
|    | b. | Briefly describe the application of genetics in animal agriculture.  | 4.0 |
|    | c. | Explain " <b>Mendel's Law of Segregation</b> " with example in animal.   | 4.0 |
| 2. | a. | What is meant by diploid? Mention the diploid chromosome numbers in goat, sheep, dog, horse, chicken and buffalo (river type). | 4.0 |
|    | b. | Briefly describe the changes in chromosome structure with neat diagram.  | 6.0 |
|    | c. | Enlist special type of chromosomes that are found in eukaryotes.   | 2.0 |
| 3. | a. | What is epistasis? Explain non-epistatic intergenic genetic interaction.   | 4.0 |
|    | b. | Distinguish between epistasis and dominance.   | 2.0 |
|    | c. | Write down about the sex chromosome mechanism in sex determination.  | 6.0 |
| 4. | a. | Distinguish between incomplete dominance and co-dominance.   | 2.0 |
|    | b. | Describe different types of linkage with significance.   | 6.0 |
|    | c. | Discuss example (s). Why linkage is an exception to " <b>Mendel's' Second Law</b> "?   | 4.0 |

### Section-B

- |    |    |   |     |
|----|----|---|-----|
| 5. | a. | What is mutation? How do gene mutations arise?  | 2.0 |
|    | b. | Briefly describe the molecular basis of gene mutation.  | 6.0 |
|    | c. | Write in short about factors affecting mutation rate.   | 3.0 |
| 6. | a. | Distinguish between sex-linked and sex-limited traits.  | 2.0 |
|    | b. | Briefly explain how sex is determined by the sex chromosome mechanism.                            | 5.0 |
|    | c. | Describe the sex-pili mediated genetic recombination in bacteria.                                 | 5.0 |
| 7. | a. | Define exon and intron.   | 2.0 |
|    | b. | Write down the bio-chemical reactions in DNA replication. Mention the " <b>Chargaff's rule</b> ". | 5.0 |
|    | c. | Enlist different types of RNA with their key functions.   | 5.0 |
| 8. |    | <b>Write short notes on any three of the followings:</b>  |     |
|    | a. | Genetic disorder  |     |
|    | b. | Test cross and back cross   |     |
|    | c. | Use of genetic engineering in animal improvement  |     |
|    | d. | Aneuploidy  |     |

**Chittagong Veterinary and Animal Sciences University**  
**DVM 3<sup>rd</sup> Year 1<sup>st</sup> Semester Final Examination 2016**  
**Course Title: General Pharmacology (Theory)**  
**Course Code: GPH-301**  
**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) How do you explain “ <b>Pharmacology</b> ”? Write down the allied disciplines of pharmacology.   | 3.0 |
|    | b) Describe the following terminologies:  | 5.0 |
|    | i) Drug   |     |
|    | ii) Poison  |     |
|    | iii) Side effect  |     |
|    | iv) Toxic effect  |     |
|    | c) Why is bio-transformation needed for drugs in biological bodies?   | 3.0 |
| 2. | a) Define and classify expectorants with examples.  | 3.0 |
|    | b) Write down the doses, mode of action, indications and contraindications of saline expectorant in livestock.  | 3.0 |
|    | c) Suppose, an adult cattle was brought to TVH with the problem of acute diarrhea and dehydration. What kind of drugs will you consider treating the animal and write down the mode of action, doses, route of administration and side effects. | 6.0 |
| 3. | a) Define and classify diuretics. Enlist the indications of diuretics commonly used in animals.   | 4.0 |
|    | b) Write down the mode of action, doses, therapeutic purposes, and contraindications of high ceiling diuretics.   | 4.0 |
|    | c) Are urinary acidifiers and alkalizer commonly used in veterinary practices? If yes, what are those and how do they work?   | 4.0 |
| 4. | a) Differentiate between alkaloids and glycosides with examples.  | 4.0 |
|    | b) Which drugs do stimulate heart and how? Write their mode of action and doses.  | 4.0 |
|    | c) Is heart tonic different from heart stimulant?   | 4.0 |

**Section-B**

- |    |  |        |
|----|--|--------|
| 5. | a) Explain the terms with examples: Carminatives, Antizymotics, Emetics and Antiemetic.  | 4.0    |
|    | b) Define and classify purgatives with examples. Write down the doses, mode of action, indications and contraindications of direct irritant purgative in cattle.   | 3.0    |
|    | c) Mention five antidiarrheal preparations with their mechanism of actions and doses.  | 4.0    |
| 6. | a) Classify NSAIDs with examples. How does meloxican work during analgesia?  | 3.0    |
|    | b) Differentiate autacoids from hormones. What are the pharmacological actions and therapeutic uses of H <sub>1</sub> and H <sub>2</sub> receptor blockers?  | 5.0    |
|    | c) Explain mechanism of action, indications and adverse effects of using steroidal drugs in livestock.   | 4.0    |
| 7. | a) Classify general anesthetics with examples. Mention the characteristics of an ideal anesthetic.   | 4.0    |
|    | b) A goat had been facing a problem of abscess at naval region. You are realized that surgical operation requires removing pus from that abscess. What kind of anesthetic agent will you suggest for that operation? Mention its name with required dose, mechanism of action and contradiction. | 4.0    |
|    | c) Define and classify parasympathomimetic and anticholinergic drugs with examples. Write down the clinical uses of those agents.  | 4.0    |
| 8. | Write short notes ( <b>any four</b> ).   | 4×3=12 |
|    | a) Bioavailability   |        |
|    | b) Biological half life of drug  |        |
|    | c) Drug potentiation   |        |
|    | d) Pharmacokinetics  |        |
|    | e) General mode of action of drugs   |        |