

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination 2016
Course Title: Pharmacology and Therapeutics (Theory)
Course Code: PHT-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) Explain: Chemotherapy, Phytobiotics and Immune pharmacology. 3.0
 b) What is drug resistance? How does the incomplete course of antibiotic develop resistance to the bacteria? 4.0
 c) Write down pharmacological dose and withdrawal period of tetracycline, quinolone and sulphonamide in milking cow. 4.0

2. a) Define dose and dosage form of drugs. 2.0
 b) Why sulphonamides are used in culmination with the trimethoprim? 2.0
 c) Write down the target sites of antifungal drugs. Classify antifungal drugs with examples. 4.0
 d) Classify antiviral drugs with examples. Write down the limitations of antiviral therapy. 4.0

3. a) Define and classify antimicrobials according to the mode of action with examples. 3.0
 b) β -Lactamase antibiotics are generally safe, but they occasionally cause death in a treated animal. Explain how? State the therapeutic properties of amoxicillin and colistin sulphate used in veterinary practices. 5.0
 c) Mention five examples of aminoglycosides. Explain mode of action, clinical uses with dose, and toxicity and drug interactions of streptomycin. 4.0

4. a) Classify cephalosporins with examples. 2.0
 b) Write down the ideal characteristics of anthelmintics. 3.0
 c) Describe the relationships of drug absorption with solubility, dosage form, pH and particle size with examples. 3.0
 d) Which drug will you consider in treating oral candidiasis? Write down the mode of action, indications, contraindications and adverse effects of the chosen drugs. 4.0

Section-B

5. a) Which antimicrobial is indicated for treatment of entamoeba infection in goat? Mention its trade name with dose and mechanism of action. 3.0
 b) Why tetracycline is called as true broad spectrum antibiotic? Write down the effects of tetracycline during the production period of livestock. 4.0
 c) Describe the biosynthesis, properties, mechanism of action, indications and resistant pattern of teixdoactin. 4.0

6. a) Define hirsutism. Write down the cause and treatment of it. 3.0
 b) Which hormonal preparations are useful to prevent, maintain, and terminate the pregnancy? Compare oxytocin, prostaglandin and ergometrine in terms of doses and mode of actions on the uterus. 5.0
 c) What are cardiac glycosides? Write down the mode of action, doses and indications of digitalis in dog. 4.0

7. a) Classify NSAIDS with examples. How ketoprofen is effective during analgesia? 3.0
 b) Differentiate autacoids from hormones. What are the pharmacological actions and therapeutic uses of H₁ and H₂ receptor blockers? 5.0
 c) Explain mechanism of action, indications and adverse effects of steroidal drugs in livestock. 4.0

8. a) How does ivermectin work against ectoparasitic infestation in goat? Write down the toxic effects of ivermectin. 4.0
 b) A German Shepherd bitch has rough grey white crust above the skin of back region where outer circular portion of crust is moist. What kind of drugs do you suggest for this? Cite its name with dose, precaution and contraindication. 4.0
 c) Write short notes on (Any two) 2×2=4.0
 - i. Anticoccidial drugs
 - ii. Antiseptics and disinfectants
 - iii. Herbal antibiotics

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination-2016
Course Title: Virology (Theory)
Course Code: VIR-301 (T)
Full Marks: 70, Time: 3 Hours

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

Section-A

- | | | | |
|----|----|--|---|
| 1. | a. | Define virus. | 2 |
| | b. | List the unique attributes of virus. | 2 |
| | c. | Mention the contributions of 5 eminent scientists in the field of virology. | 3 |
| 2. | a. | Discuss the criteria of purity of virus. Write down the importance of purification of virus. | 3 |
| | b. | Illustrate the different procedures of virus purification. | 4 |
| 3. | a. | Name 10 viruses causing respiratory tract infections in human, animals and birds. | 2 |
| | b. | Classify the genus Rhabdoviridae and write down the nature of Rabies virus. How will you prevent Rabies? | 3 |
| | c. | What are the serotypes of foot and mouth disease virus (FMDV)? State why are serotypic vaccine is not a solution to prevent FMD? | 2 |
| 4. | a. | Name some pseduomyxo virus. Classify paramyxoviridae. How will you determine the antigenicity of Newcastle disease virus (NDV)? | 4 |
| | b. | Describe the diagnostic procedure of NDV. | 3 |
| 5. | | Shortly state the cultural and physico-chemical properties of fowlpox, duck virus enteritis and chicken anemia virus. What samples are to be collected for the identification of the above agents? | 7 |
| 6. | a. | Explain the structure of infectious bursal disease virus (IBD). | 3 |
| | b. | What are the reasons of IBDV vaccination failure? | 4 |

Section-B

- | | | | |
|-----|----|--|---|
| 7. | a. | What is virus inactivation? | 1 |
| | b. | Explain the different processes of virus inactivation. | 3 |
| | c. | What is the basis of Baltimore classification? | 1 |
| | d. | Discuss modern virus classification. | 2 |
| 8. | a. | Explain different virus versus cell interaction. | 3 |
| | b. | What is primary and secondary viremia? | 1 |
| | c. | Illustrate virus and host interactions at multi cellular level. | 3 |
| 9. | a. | How many segments are present in Avian Influenza virus? Mention the role of segment 1, 2 and 3. | 2 |
| | b. | What are the reasons that AIVs undergo lots mutation? | 2 |
| | c. | Explain the OIE criteria of high pathogenic avian influenza virus (HPAIV). | 3 |
| 10. | | List the viral diseases of poultry mentioning their family, nucleic acid type, strandness, symmetry and presence or absence of envelope. | 7 |
| 11. | a. | Differentiate Marek's disease virus from lymphoid leukosis virus. | 3 |
| | b. | Name the causal agents of duck plague and avian influenza. How will you differentiate them? | 4 |
| 12. | a. | Define interferon. | 1 |
| | b. | What is the mechanism of interferon in stopping viral replication? | 3 |
| | c. | Mention the salient features of interferon. | 3 |

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination 2016
Course Title: Veterinary Entomology (Theory)
Course Code: VNE-301
Full Marks: 70; Time: 3 Hours

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

Section-A

1. a) What is Entomology? Briefly describe the importance of Entomology in Bangladesh. 3
b) Briefly describe the life cycle, pathologic significance and control measures of Culicoides. 4
2. a) Write down the characteristics of arthropod parasites. Briefly describe the beneficial and harmful effects of arthropods. 4
b) Classify Veterinary important arthropods and give example in each case. 3
3. a) Enlist the mouthparts of typical insect. Describe the mouthparts of a blood sucking fly. 5
b) Give the main differentiating point of the orders Insecta and Arachnida. 2
4. a) Why ticks are important in Veterinary Science? 3
b) Write down the pathologic significance and life cycle of *Boophilus microplus*. 4
5. a) Enlist the mites affecting poultry. Which one is responsible for scaly leg in poultry? Write down its pathologic significance. 5
b) Mention the epidemiology and significance of lice in livestock. 2
6. a) Describe the life cycle of *Tabanus* fly. 4
b) Write down the feeding mechanism of *Musca*. 3

Section-B

7. a) Differentiate sub-orders Nematocera, Brachycera and Cyclorrhapha. 4
b) Write down the scientific name(s) of the vectors transmitting the following diseases: 3
(i) Hump sore, (ii) Babesiosis, (iii) African swine fever, (iv) Anthrax, (v) Plague, and (vi) Dengue fever.
8. a) How will you differentiate the following (any three): 6
(i) Sucking lice from biting lice, (ii) Soft tick from hard tick,
(iii) Diptera from Siphoneptera, and (iv) Myiasis from strike.
b) Define diapause. 1
9. a) Briefly describe the morphology of house fly. 4
b) Name four lice affecting the livestock in Bangladesh. 2
c) Define metamorphosis. 1
10. a) Briefly describe the lesions and pathologic significance of demodectic mange in dog. 4
b) How will you diagnose mite infestation in laboratory? 3
11. a) Write short note on tick paralysis. 4
b) Define 3-host, 2-host and 1-host tick. 3
12. a) Define flea hotspots and flea dirt. 3
b) Write down the control measures of flea in pet animals. 4

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

Section-A

1. a) What is Entomology? 1
b) Briefly describe the life cycle, pathologic significance and control measures of Culicoides. 4
2. a) Write down the characteristics of arthropod parasites. Briefly describe the beneficial and harmful effects of arthropods. 3
b) Classify Veterinary important arthropods and give example in each case. 3
3. a) Enlist the mouthparts of typical insect. Describe the mouthparts of a blood sucking fly. 5
b) Give the main differentiating point of the orders Insecta and Arachnida. 1
4. a) Why ticks are important in Veterinary Science? 2
b) Write down the pathologic significance and life cycle of *Boophilus microplus*. 4

Section-B

5. a) Differentiate sub-orders Nematocera, Brachycera and Cyclorrhapha. 3
b) Write down the scientific name(s) of the vectors transmitting the following diseases: 3
(i) Hump sore, (ii) Babesiosis, (iii) African swine fever, (iv) Anthrax, (v) Plague, and (vi) Dengue fever.
6. How will you differentiate the following (any three): 6
(a) Sucking lice from biting lice, (b) Soft tick from hard tick,
(b) Diptera from Siphonoptera, and (d) Myiasis from strike.
7. a) Briefly describe the morphology of house fly. 3
b) Name four lice affecting the livestock in Bangladesh. 2
c) What do you know about nasal bot fly. 1
8. a) How will you diagnose demodectic mange? 2
b) What is scaly leg in poultry? Mention its causes. 1
c) Write short note on tick paralysis. 3

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination 2016
Course Title: Systemic and Avian Pathology (Theory)
Course Code: SAP-301
Full Marks: 70; Time: 3 Hours



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

Section-A

1. a) Define enteritis. What are the causes of intestinal obstructions? 3
b) Briefly describe the causes of malabsorption syndrome. 4
2. a) List four diseases that cause myopathy and myositis. 2
b) Write down the causes and pathogenesis of fibrous osteodystrophy in dogs. 3
c) Write down the pathogenesis of equine rhabdomyolysis in sketch form. 2
3. a) Define abortion and still birth. 2
b) Why does brucellosis usually cause retention of placenta? 3
c) Define pyometra, phimosis, paraphimosis and balanitis. 2
4. a) Define hyperkeratosis, parakeratosis, acanthosis and ballooning degeneration. 2
b) Write short note on Gitter cell. 2
c) Define hydrocephalus, encephalitis, encephalomalacia and meningoencephalomyelitis. 3
5. a) Describe the pathogenesis and pathologic significance of ruminal acidosis. 4
b) What is traumatic reticulo-pericarditis? Write down its mechanism and pathologic significance. 3
6. a) Enlist the immunosuppressive diseases of poultry. 2
b) Write down the pathology of IBD. 3
c) Mention the post mortem findings of Newcastle disease. 2

Section-B

7. a) Define stomatitis. Write down its etiology. 2
b) What do you mean by bloat? Mention the mechanism of free gas bloat in cow. 2
c) Write a short note on hepatic necrosis. 3
8. a) What is nasal polyp? How will you differentiate nasal polyps from bovine nasal granuloma? 3
b) Define pneumonia. Mention the gross and microscopic lesions of pneumonic lung. 4
9. a) Define glomerulonephritis. Write down the pathogenesis and pathology of acute proliferative glomerulonephritis. 4
b) Briefly describe the pathogenesis of urolithiasis. 3
10. a) Define anemia. Mention the types of anemia on the basis on causes. 2
b) Write down the causes of hemolytic and hemorrhagic anemia. 3
c) Write down the microscopic picture of anemia. 2
11. a) Define rickets and osteomalacia. Write down the etiology and pathology of rickets. 3
b) Write in brief the causes and consequences of hyperparathyroidism. 3
c) Which hormone is responsible for gigantism? 1
12. a) Enlist the forms of colibacillosis in poultry. 1
b) Write down the post mortem findings of cecal coccidiosis and fowl cholera. 4
c) Write down the epidemiology and pathology of CRD. 2

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

Section-A

1. a) Define enteritis. What are the causes of intestinal obstructions? 3
b) Briefly describe the causes of malabsorption syndrome. 4
2. a) List four diseases that cause myopathy and myositis. 2
b) Write down the causes and pathogenesis of fibrous osteodystrophy in dogs. 3
c) Write down the pathogenesis of equine rhabdomyolysis in sketch form. 2
3. a) Define abortion and still birth. 2
b) Why does brucellosis usually cause retention of placenta? 3
c) Define pyometra, phimosis, paraphimosis and balanitis. 2
4. a) Define hyperkeratosis, parakeratosis, acanthosis and ballooning degeneration. 2
b) Write short note on Gitter cell. 2
c) Define hydrocephalus, encephalitis, encephalomalacia and meningoencephalomyelitis. 3
5. a) Describe the pathogenesis and pathologic significance of ruminal acidosis. 4
b) What is traumatic reticulo-pericarditis? Write down its mechanism and pathologic significance. 3
6. a) Define cardiac failure and acute cardiac failure. 2
b) Write down the causes and mechanism of left sided heart failure. 2
c) Briefly describe vegetative and mural endocarditis. 3

Section-B

7. a) Define stomatitis. Write down its etiology. 2
b) What do you mean by bloat? Mention the mechanism of free gas bloat in cow. 2
c) Write a short note on hepatic necrosis. 3
8. a) What is nasal polyp? How will you differentiate nasal polyps from bovine nasal granuloma? 3
b) Define pneumonia. Mention the gross and microscopic lesions of pneumonic lung. 4
9. a) Define glomerulonephritis. Write down the pathogenesis and pathology of acute proliferative glomerulonephritis. 4
b) Briefly describe the pathogenesis of urolithiasis. 3
10. a) Define anemia. Mention the types of anemia on the basis on causes. 2
b) Write down the causes of hemolytic and hemorrhagic anemia. 3
c) Write down the microscopic picture of anemia. 2
11. a) Define rickets and osteomalacia. Write down the etiology and pathology of rickets. 3
b) Write in brief the causes and consequences of hyperparathyroidism. 3
c) Which hormone is responsible for gigantism? 1
12. a) How does intersex develop in case of freemartinism? 2
b) Write down clinical significance of follicular cyst. 2
c) Write a short note on goiter. 3

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination-2016
Course Title: Fundamentals 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 questions** from each section of which question No.1 is compulsory. Use separate answer script for each section.)

Section-A

1. a) Define clinical medicine and population medicine. 1.0
b) Classify diseases with examples according to clinical manifestations. 5.0
c) What are the various routes of drug administration? 2.0

2. a) List the components of physical examination. State the different consistencies of organs felt at palpation. 4.0
b) Differentiate between: 3×1=3.0
 i) Pleurisy and pneumonia
 ii) Fat and obesity
 iii) Mania and frenzy
c) Name the physical examination techniques that can be used to diagnose following conditions: 0.4×5=2.0
 i) A cow with hardware disease
 ii) A lamb with ascites
 iii) A horse with cardiac insufficiency
 iv) A cow with udder edema
 v) A bull with snoring disease

3. a) What is prognosis? Describe its importance in treatment. 2.0
b) What is pulse? Briefly discuss the quality of pulse. 5.0
c) How do murmurs develop? Show in a diagram. 2.0

Section-B

4. a) Categories shock with brief explanation of those. 4.0
b) What is paracentesis? In how many ways you can do paracentesis? 3.0
c) What is advice and when it should be provided? 2.0

5. a) What are the techniques of inspection and auscultation? Describe palpation and percussion findings. 4.0
b) Define and classify dehydration. 3.0
c) Briefly discuss the types of partial control of animals. 2.0

6. Write short notes on **any three** of the followings: 3×3=9
 i) Role of corticosteroid in shock treatment
 ii) Body Condition Scoring (BCS)
 iii) Clinical propaedeutics
 iv) Diagnosis

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination 2016

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 **three** questions from each section of which **question no. 1 is compulsory**. Use separate answer scripts for each section)

Section-A

1. a. What do you mean by the science of 'Animal Breeding'? Write down the basic principles of **Robert Bakewell** in Animal Breeding. 2.0
b. Define trait. How does it differ from phenotype? Distinguish between quantitative and qualitative traits. 3.0
- 2 a. Distinguish between gene frequency and genotype frequency. 1.0
b. State "**Hardy-Weinberg Law of Equilibrium**". Indicate the steps with necessary conditions to proof the "**Hardy-Weinberg Law**". 3.0
c. Describe how selection changes gene and genotype frequency in an animal population. 2.0
- 3 a. What do you mean by genetic parameters? What are those? 1.0
b. Give lay-out of the procedures of three methods of estimation of heritability of an economic trait. 3.0
c. How heritability does differ from repeatability of a trait? 2.0
- 4 a. What is genetic gain? Mention the factors those enhances gain for a trait. 1.0
b. Estimate genetic gain for milk yield using cow to bull pathway in consideration of 6g for milk yield is USD 50.0. 2.0
c. State current cattle breeding policy of Bangladesh. Explain its drawback in animal improvement for milk production. 3.0

Section-B

- 5 a. Variation is called the "**Raw Material for Breeding Works**"-justify. 2.0
b. Explain additive genetic variance is superior to other genetic components. 2.0
c. Genetic correlation is important for animal improvement-Explain it. 2.0
- 6 a. If the breeding objective is to increase meat production, then list the selection criteria with its heritability value. 1.0
b. Distinguish between **BLP** and **BLUP**. 1.0
c. Construct selection index for selecting best cows in the case of increase milk production. 4.0
- 7 a. Define cross-breeding. Explain it's important in animal improvement. 1.5
b. Explain different kinds of heterosis with examples. Proof heterosis value in F_1 generation is double than F_2 generation in case of dominant gene action. 3.5
c. For the dairy development of Bangladesh which method will you choose and why? 1.0
- 8 a. Write in brief how will you select a proven bull for increasing milk production of Bangladesh? 3.0
b. How will you develop a modern broiler strain to produce safer meat in 35 days? 3.0

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination 2016
Course Title: Dairy Microbiology (Theory)
Course Code: DMC-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. Fragmented questions are discouraged.)

Section-A

1. a) What is Dairy Microbiology? Write the roles of microorganisms in dairy industry. 3.0
b) State the characteristics of Lactobacteriaceae in raw milk and dahi production. 2.0
2. a) What do you mean by milk hygiene? 1.0
b) Indicate the sources of milk contamination. Briefly discuss milk contamination by internal agents. 3.0
c) Mention the role of milking utensils in milk quality. 2.0
3. a) State the concept of the growth of micro-organisms. Describe the growth of micro-organisms showing different stages. 3.0
b) Enumerate the factors that affect the growth of micro-organisms with an explanation of 'Micro environment' and 'pH'. 3.0
4. a) What is HACCP? Write down the principles of HACCP in milk processing industry. 4.0
b) Mention the common hazards involved in milk processing. 2.0

Section-B

5. a) State the importance of the family "Enterobacteriaceae". Write down the family characteristics and the genera of dairy importance under the family. 3.0
b) Write a role on "Coliform bacteria" highlighting its importance in public health. 3.0
6. a) What is a starter culture? Classify starter culture. 2.0
b) State the common cultural defects with brief discussion. 2.0
c) Mention common bacterial cultures used in making fermented dairy products. 2.0
7. a) What do you mean by milk borne diseases? 1.0
b) How will you diagnose food intoxication? 3.0
c) Write down the measures to prevent food intoxication. 2.0
8. Write short notes (**any two**): 2×3=6.0
 - a) Target theory;
 - b) Family Micro-coccaceae;
 - c) Cleaning and Cleansing dairy utensils;
 - d) Homo-fermentative micro-organism

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination-2016
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** questions from each section of which question No.1 is compulsory. Use separate answer script for each section. Fragmented answers are discouraged)

and 5 are

Section-A

1. a) What are the sources of replacement heifers in a dairy farm? Which one is more reliable and why? 4.0
b) State the reasons of growth retardation in heifers? 3.0
c) Briefly describe the feeding system of heifers. 4.0
2. a) Explain the division of beef cattle industry in specialized beef producing countries. 5.0
b) Discuss the feeding programme for fattening the cattle as suggested by BLRI. 7.0
3. a) Discuss the reproductive characteristics of buffalo. 8.0
b) Discuss the care and management procedure of buffalo bulls. 4.0
4. a) Discuss the scenario of traditional dairy farming in Bangladesh. 6.0
b) Write down the milk letdown mechanism of cattle. 6.0

Section-B

5. a) What do you mean by comfort zone of cattle? Mention the comfort zone for tropical and temperate types of cattle. 4.0 5.0
b) How do the temperate type cattle suffer in tropical environment due to quality of feed, high humidity and solar radiation? 8.0 6.0
6. a) Define "silent heat". How will you overcome this problem in buffalo production? 4.0
b) How will you select perfect draft cattle? 4.0
c) Define "adaptability" and "acclimatization". State the difference between *Bos taurus* and *Bos indicus* regarding their adaptability in tropical environment. 4.0
7. a) What are the measures to be taken to reduce the occurrence of disease/infection in commercial dairy herd? 4.0
b) Define and state the process of "drying off". 4.0
c) Tabulate the nutritional requirement of a dried off cow. 4.0
8. Write short notes (any three): 3×4=12
a) Important diseases and common preventive measures in a dairy herd;
b) Dairy ration;
c) True cell metabolism theory;
d) Feeding problems of draught cattle;
e) Types of milking;

Chittagong Veterinary and Animal Sciences University
DVM 3rd Year 1st 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 1st 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 " Mendel's Law of Segregation " 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 " Mendel's' Second Law "? | 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 " Chargaff's rule ". | 5.0 |
| | c. | Enlist different types of RNA with their key functions. | 5.0 |
| 8. | | Write short notes on any three of the followings: | |
| | 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 3rd Year 1st 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 “ Pharmacology ”? 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 ₁ and H ₂ 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 (any four). | 4×3=12 |
| | a) Bioavailability | |
| | b) Biological half life of drug | |
| | c) Drug potentiation | |
| | d) Pharmacokinetics | |
| | e) General mode of action of drugs | |