

Chattogram Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination-2022
Course Title: General Pharmacology (Theory)
Course Code: GPH-202 (T)
Full Marks: 35, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer **Three (3)** questions from each section where question number **1 and 5** are compulsory. Use separate answer script for each section. Split answers are strongly discouraged.)

SECTION-A

1. a) Define drugs. Write down the possible sources of drugs with examples. 2
b) What do you mean by Pharmacology, Therapeutic pharmacology, Pharmacognosy, Therapeutic index, ED₅₀ and LD₅₀? 3
2. a) What are the different forms of medicines? Write down the principal factors that modify the drug action. 3
b) State the available routes of drug administration. Briefly describe the forms of drug toxicities that can be commonly encountered in men and animals. 3
3. a) Enlist the disadvantages of using systemic antacids in animals. 2
b) Emetics are contraindicated in horses, rats and cattle. Shortly describe the causes. 2
c) Differentiate between the reflex sialics and direct sialics with examples. 2
4. a) Sketch the mechanism of action of bulk and osmotic purgatives. 3
b) How does metoclopramide act both as an emetic and stomachic? Describe briefly. 3

SECTION-B

5. a) A cat is given an oral drug in tablet form to act in its urinary bladder. Shortly describe the pharmacokinetic features necessary to facilitate this drug to reach the target site and execute the best effect. 3
b) Sketch down the mechanism of action of fluticasone. 3
6. a) Differentiate between the pharmacokinetics of Gabapentin and Pregabalin. 2
b) Describe the pharmacology of Bromhexine. 2
c) Differentiate between ketamine and diazepam in a tabular manner. 2
7. a) What is meant by histamine and antihistamine? Write down the factors responsible for the release of histamine. 3
b) Define thiazide diuretics. Briefly explain the mechanism of action and applications of thiazide diuretics. 3
8. a) Define narcotics and hypnotics. "Benzodiazepines are better hypnotics than barbiturates" - justify your answer. 3
b) What do you mean by anesthetic? List local and general anesthetics with their clinical uses. 3

Chattogram Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination-2022
Course Title: Poultry Production (Theory)
Course Code: PPR-202(T)
Full Marks: 70, Time: 3 Hours

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

SECTION-A

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|----|--|---------|
| 1. | a) Define pullet, internal layer, straight-run chick and spent hen. | 2.0 |
| | b) State the biological classification of duck and pigeon. | 4.0 |
| | c) Write down the unusual characteristics of Muscovy duck, Guinea fowl and Pigeon. | 5.0 |
| 2. | a) What is brooding? Discuss the brooding management of duckling. | 4.0 |
| | b) Briefly discuss the advantages and disadvantages of duck farming in Bangladesh. | 4.0 |
| | c) Explain –“Prevention is better than cure.” How will you prevent duck cholera in a commercial duck farm? | 4.0 |
| 3. | a) What are the pigeon breeds and varieties available in Bangladesh? | 2.0 |
| | b) Do you think that “Pigeon farming for profitable squab production is feasible in Bangladesh?” Justify your statement. | 5.0 |
| | c) Why is double nest required for breeder pigeon? Is pigeon hatchery possible in poultry sector? Give your opinion. | 5.0 |
| 4. | Write short notes on any four (4) | 4×3 =12 |
| | a) Heat stress in poultry b) Factors affecting the hatchability of egg | |
| | c) Housing of chicken d) Cannibalism e) Rearing and breeding of quail | |
| | f) Poultry feeding | |

SECTION-B

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|----|---|---------|
| 5. | a) Define Poultry, Poultry Science, Strain, Variety and Hybrid. | 2.0 |
| | b) State the tools and chronological events for developing modern breeds, varieties and strains of chicken. | 9.0 |
| 6. | a) What is broiler? Mention the broiler and layer strains available in Bangladesh. | 2.0 |
| | b) Discuss the steps of processing live broiler. | 7.0 |
| | c) Sketch the lay-out of an ideal broiler processing plant. | 3.0 |
| 7. | a) What is watchdog? Classify the breeds and varieties of Guinea fowl with example. | 2.0 |
| | b) State the rearing management of keet. | 5.0 |
| | c) Distinguish between Jack and Jenny. | 3.0 |
| | d) Write the green grass digestion procedure of geese. | 2.0 |
| 8. | Write short notes on any four (4) of the following | 4×3 =12 |
| | a) Classes of broiler turkey b) Productive traits of geese c) Enriched cage and conventional cage d) Moulting and forced moulting e) Mule and Muscovy duck f) Fowl and Waterfowl g) Lux and Lumen | |

Chattogram Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination-2022
Course Title: Poultry Nutrition and Feed Milling Technology (Theory)
Course Code: PNT-202 (T)
Full Marks: 70, Time: 3 Hours

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

SECTION-A

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|----|--|-----------|
| 1. | a) Define supplement, nutrient and ingredient. | 3.0 |
| | b) State the principles of poultry feeding. | 4.0 |
| | c) Discuss the conventional and unconventional poultry feeds with examples. Clarify the advantages and disadvantages of using unconventional feed ingredients in ration. | 4.0 |
| 2. | a) What are anti-nutritive factors and anti-metabolites? Are the limiting amino acids same for all the animals? | 4.0 |
| | b) Why methionine is so important in the poultry ration? | 4.0 |
| | c) List the essential, limiting and critical amino acids for poultry. | 4.0 |
| 3. | a) Write down the occurrence and safe level of mycotoxins in food and feed. | 4.0 |
| | b) Discuss how you will control the mycotoxins in poultry feeds. | 4.0 |
| | c) State the physical, biological and chemical process of evaluating poultry feed stuffs. | 4.0 |
| 4. | Write short notes (any four) on the followings: | 4x3= 12.0 |
| | i) Antioxidant | |
| | ii) Feeding standard | |
| | iii) Enzymes | |
| | iv) Cage layer fatigue | |
| | v) Macro minerals | |

SECTION-B

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|----|---|-----|
| 5. | a) What are vitamins and pro-vitamins? Write down the differences between fat-soluble and water-soluble vitamins. | 3.0 |
| | b) Briefly discuss the functions and deficiency symptoms of vitamin A, D, B ₁ and B ₂ . | 4.0 |
| | c) Write down the inter-relationship among the Ca, P and vitamin D ₃ . | 4.0 |
| 6. | a) Discuss the evaluation process of feed ingredients in a poultry feed mill. | 4.0 |
| | b) What are the effects that may occur during poultry feed storage? Discuss the duration and freshness of stored poultry feed. | 4.0 |
| | c) What factors should be considered during purchase of poultry feed ingredients? | 4.0 |
| 7. | a) What are the major costs in poultry production? Write down the strategies with which you can reduce this cost to make the farm profitable. | 4.0 |
| | b) What is FCR/FCE? Discuss the factors that influence the FCR of broiler chicken. | 4.0 |
| | c) Suppose you have 2000 day-old Star-cross layer birds, how much amount of maize, soybean meal and protein concentrate will be required from 1 st week to 52 weeks? | 4.0 |
| 8. | a) Sketch the process of making mash and pellet feed. Briefly discuss the feed milling process. | 4.0 |
| | b) Write down the primary minimum requirements to establish a feed mill in your village. | 4.0 |
| | c) List the nutrient requirements of broiler grower and layer-layer ration. | 4.0 |

Chattogram Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination-2022
Course Title: Systemic Bacteriology and Mycology (Theory)
Course Code: SBM-202

Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer **THREE (3)** questions from each section where question number **1 and 5** are compulsory. Use separate answer script for each section. Fractions of the questions should be answered together.)

SECTION-A

1. a) Describe the growth characteristics of the organism that causes anthrax in animals. Name three disease conditions caused by this organism in humans. 4+1=5
b) Illustrate the general characteristics of enzymes and toxins produced by *Staphylococcal* species. 6

2. a) Enlist 4 different types of mycotoxins with the organisms that produce them. Write down the laboratory diagnosis of *Malassezia pachydermatis* in dogs. 2+3=5
b) Name the organisms that cause "ring worm" in cattle and dogs. Illustrate the diagnostic procedures of leptospirosis in dogs. 1+6=7

3. a) Name 5 organisms that cause abortion in animals. How can you diagnose brucellosis in a cattle farm? 1+5=6
b) Write down the colony characteristics of *Campylobacter fetus*, *Pasteurella multocida* and *Pseudomonas aeruginosa*. 2x3=6

4. a) How can you diagnose the organism that causes brooder pneumonia in chicken? 3
b) Explain the term acid fastness of an organism. Outline the diagnostic procedure of the organism that causes Lumpy jaw in cattle. 1+4=5
c) Write down the general properties of Rickettsiales and Chlamydia. 4

SECTION-B

5. a) Classify *Salmonella* serovars based on host preference. Illustrate the sequence of procedures for the isolation and identification of *Salmonella*. 2+5=7
b) How will you differentiate species of *Streptococcus* causing bovine mastitis? Apart from streptococci what are the other pathogens associated with bovine mastitis? 4

6. a) Which specimens will you collect for the detection of *Campylobacter* species? How will you isolate and identify *Campylobacter jejuni* from poultry? 2+4=6
b) Write down the key characteristics of *Mycoplasma*. Show diagrammatically the stages seen in the development of chlamydial forms in host cells. 2+4=6

7. a) Which organisms are responsible for causing bovine and equine farcy? Write down the biological functions of the major toxins produced by each *Clostridium perfringens* type. 2+4=6
b) State the principal characteristics of *Haemophilus* and *Brucella*. Give the characteristic microscopic appearance of *Clostridium tetani* and *Dermatophilus congolensis*. 3+3=6

8. a) Mention the important species of *Corynebacterium* of veterinary importance. Give the sequence of procedures for the isolation and identification of the causal agent of fowl cholera. 2+4=6
b) Enumerate the disease conditions produced by *Actinobacillus* species in animals. Name the enzymes produced by streptococcal species and explain their pathogenic effects. 2+4=6

Chattogram Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination-2022
Course Title: Biostatistics (Theory)
Course Code: BST-202 (T)
Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer **four (4)** questions from each section where question number **1 and 6** are compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

1. a) What do you mean by biostatistics? What are the functions and limitations of biostatistics? 4
b) Explain the type and scale of measurement of the following bold variables: 4
i) **No. of cattle farm** in Chattogram ii) **Letter grade** obtained by student iii) **Marks in biostatistics** secured by student iv) **Weight** of dog v) **Humidity and temperature** of Chattogram city
2. a) What are the graphs to describe categorical variable? Describe the differences between histogram and bar diagram. 5
b) Explain moments with its classification. 4
3. a) Why do you need dispersion over central location? Explain which measure is the best measure of dispersion. 5
b) Describe the measures of central tendency. 4
4. a) What are the shape characteristics of a distribution and classify them? The third moment and variance of age distribution of cows are 4 years and 2 years, respectively. Now comment on this distribution. 5
b) Distinguish between i) Primary and secondary data ii) Census and sample survey 4
5. a) Define binomial distribution. Show that the mean of binomial distribution is np . Given that the mean of binomial distribution is 120 and probability of success is 4. What is the number of trials? 5
b) What is Bernoulli distribution? State some of its important properties. 4

SECTION-B

6. a) Milk yield increases when calving interval decreases. What kind of relationship you observe in this clause? What are the properties of this relation? 4
b) Describe the differences between correlation coefficient and regression coefficient. 4
7. a) What are the assumptions of a regression model? Estimate the parameters of a regression model. 5
b) A handmade formula was given in two types of breeds of cows to observe the weight gain. How can you test whether the average weight gain was same between two types of breeds or not? 4
8. a) Three different doses of medicine were randomly allocated to 18 cows of the same breed to observe the length of days of removing FMD. Which design is applicable in this situation and describe the analysis of variance of this design? 5
b) Define block and treatment. Briefly describe the principles of design of experiment. 4
9. a) A random sample is drawn from a farm. The variation of milk production is σ . How can you test whether or not the average milk production is 5 liters? 5
b) Prove that $A.M. \geq G.M. \geq H.M.$ 4
10. Write short notes on (any three): 3x3=9
 - i) Systematic random sampling
 - ii) Normal distribution and its properties
 - iii) Type I error, type II error and power of a test
 - iv) Specified variance test
 - v) Test of independence of attributes

Chattogram Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination-2022
Course Title: Veterinary Nematology (Theory)
Course Code: VNM-202 (T)
Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer five (5) questions from each section. Use separate answer script for each section. Fractions of the questions are encouraged to answer together.)

SECTION-A

1. a) Classify veterinary important superfamilies of nematodes with their infective stages. 4
b) Briefly describe the factors in the transmission of parasitic infections in animals. 3
2. a) Sketch the life cycle and pathogenic significance of 'pig-kidney worm' infection. 4
b) Write down the general harmful effects of 'Ascariasis' in different animals. 3
3. a) Enlist the properties of an ideal anthelmintics. 3
b) Briefly describe the general preventive and control measures against parasitic infections in a dairy farm. 4
4. a) Write down the risk factors associated with 'Humpsore' in cattle. 3
b) Mention the typical morphological features of '*Oesophagostomum radiatum*' and '*Trichuris vulpis*'. 4
5. a) Write down pathogenic significance of 'Pimply gut' in sheep. 4
b) Explain 'Peri-parturient rise' with its significance. 3
6. a) Enlist the parasites which cause 'Equine Strongylosis'. Sketch the pathogenesis of 'Red worm' infection in a donkey. 4
b) Write short note on 'verminous aneurysm'. 3

SECTION-B

7. a) Contrast the morphological features of cestodes and trematodes with nematodes. 4
b) Sketch the pathogenic significance of '*Spirocerca lupi*' infection in dogs. 3
8. a) List the roundworms of birds with their predilection sites. 3
b) Describe the life cycle and pathogenic significance of 'Gapeworm' infection in birds. 4
9. a) Differentiate the life cycle of '*Dictyocaulus viviparus*', '*Oslerus osleri*' and '*Aelurostrongylus abstrusus*'. 3
b) Sketch the life cycle of 'Hookworm' of dogs. 4
10. a) How will you diagnose the following parasitic infections in a parasitology laboratory? 0.5X6=3
i) *Haemonchus contortus* ii) *Capillaria anatis* iii) *Toxoascaris leolina*
iv) *Dirofilaria immitis* v) *Dioctophyma renale* vi) *Heterakis gallinarum*
b) Write down the scientific name/causal agent against the following names/conditions. 0.5X8=4
i) Nodular abomasitis ii) Guinea worm iii) Large-mouth bowel worm
iv) Sweet bleeding v) Calabar syndrome vi) Thorny-headed worm
vii) Parthenogenic worm viii) Elephantiasis
11. a) List the nematodes of public health significance. 3
b) Briefly describe the life cycle and pathogenic significance of 'Habronemiasis' in horse. 4
12. Write short notes on any two (2) of the followings. 3.5X2=7
i) Arrested larval development ii) Verminous pneumonia in animals
iii) Neglected tropical diseases iv) Self cure phenomenon

Chattogram Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination-2022
Course Title: Pet and Small Ruminant Production (Theory)
Course Code: PSR-202(T)
Full Marks: 35, Time: 3 Hours
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(Figures in the right margin indicate full marks. Answer any three (3) questions from each section where question number 1 is compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

- | | | | |
|----|----|--|--------|
| 1. | a) | Classify goat breeds with example(s) according to their purpose of rearing. | 2.0 |
| | b) | Briefly explain the feeding habits and nutritional requirements of goat. | 3.0 |
| 2. | | What are the general management practices and training methods for keeping cats at home? | 6.0 |
| 3. | a) | Classify sheep breeds with examples according to wool type. | 2.0 |
| | b) | “Sheep is an important animal for rural communities” – justify the statement. | 4.0 |
| 4. | | Write short notes on any three (3) | 2×3 =6 |
| | a) | Reproductive efficiency and fertility of goats | |
| | b) | Breeding behaviour of dogs | |
| | c) | Reproductive behaviour of cats | |
| | d) | Indigenous sheep of Bangladesh | |

SECTION-B

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|----|----|--|---------------|
| 5. | a) | How will you prepare an ewe for breeding? | 3.0 |
| | b) | Describe the detail procedure of lambing of an ewe. | 3.0 |
| 6. | a) | What points should be considered while selecting a pup as a pet? | 3.0 |
| | b) | Briefly describe the following breeds - | 1.5 × 2 = 3.0 |
| | | i) Pug | |
| | | ii) Labrador | |
| 7. | a) | How will you detect different stages of oestrous in a dog? | 3.0 |
| | b) | Describe the following terms – | 1.5×2 = 3 |
| | | i) Pseudo-pregnancy in dog | |
| | | ii) Activated sleep | |
| 8. | a) | Describe the process of bathing a cat. | 3.0 |
| | b) | How will you provide care to an orphan cat? | 3.0 |

Chattogram Veterinary and Animal Sciences University
DVM 2nd Year 2nd Semester Final Examination-2022
Course Title: General Pathology-II and Nutritional Pathology (Theory)
Course Code: GNP-202 (T)
Full Marks: 35, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer **three (3)** questions from each section where question number **1** is compulsory. Use separate answer script for each section. Fractions of the questions are encouraged to answer together.)

SECTION-A

- | | | | |
|----|----|---|---|
| 1. | a) | Define 'Heart failure cell' and 'Nut meg liver'. Write down their indications. | 2 |
| | b) | Write down the pathogenesis of 'equine rhabdomyolysis'. | 3 |
| 2. | a) | Define 'repair' and 'resolution'. Classify the cells with examples on the basis of regenerative capacity. | 3 |
| | b) | How does cell-mediated immune response combat with a foreign antigen? | 3 |
| 3. | a) | Define autoimmunity and immunodeficiency. | 1 |
| | b) | How do autoimmune diseases develop? | 2 |
| | c) | What are the causes of immunodeficiency? | 3 |
| 4. | a) | What types of bone deformities occur due to 'hypovitaminosis'? | 1 |
| | b) | How do you identify 'fibrinous inflammation' and 'catarrhal inflammation' grossly? | 2 |
| | c) | Write short note on 'Grass tetany' or 'Pregnancy toxemia'. | 3 |

SECTION-B

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|----|----|--|---------|
| 5. | a) | Write down the pathology of 'Currant jelly clot'. | 3 |
| | b) | How do you differentiate 'antemortem clot' from 'postmortem clot'? | 2 |
| | c) | Mention the name of three parasites which cause embolism. | 1 |
| 6. | a) | Write in brief about 'antigen presenting cell' and 'antigen presentation'. | 3 |
| | b) | Discuss the conditions develop in case of liver diseases. Why and how these are occurred? | 3 |
| 7. | a) | Enlist five metabolic diseases of cattle. Write down the pathogenesis of 'Milk fever'. | 3 |
| | b) | What happens to the poultry chicks if there is a deficiency of Vit. A, E and B2? | 2 |
| | c) | What is the relationship between Vit. K deficiency and Haemorrhage? | 1 |
| 8. | a) | Write down the beneficial effects of 'exudation' and 'fibrin' formation during inflammation? | 1 |
| | b) | Describe the mechanism of 'tubercle' formation in bovine tuberculosis. | 3 |
| | c) | Write down the name of inflammation found in the following diseases-
i) FMD ii) Anthrax iii) Infectious Bursal Disease iv) Diphtheria | 0.5X4=2 |