

Chattogram Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination-2022
Course Title: Fundamental of Clinical Medicine (Theory)
Course Code: FCM-301
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 (One)** is compulsory. Use separate answer script for each section. Fractions of the questions are encouraged to answer together.)

SECTION-A

- | | | | |
|----|----|---|-------|
| 1. | a) | Define clinical medicine and clinical propaedeutics. | 1 |
| | b) | Enumerate the scope of clinical medicine. | 2 |
| | c) | What are the normal ranges of temperature, respiration, pulse and heart rate of cattle, goat, horse, dog and cat? | 2 |
| 2. | a) | What do you mean by diagnosis? Classify it. | 1+1=2 |
| | b) | What are the five methods we generally use to diagnose a sick animal? | 1 |
| | c) | Briefly describe the key abnormality method of diagnosis chronologically. | 3 |
| 3. | a) | Define clinical restraining. Enumerate one method of restraining in cattle and horse. | 2 |
| | b) | How do you label a sample before shipment to the laboratory? | 1 |
| | c) | Define and classify anamnesis. Briefly explain the way of asking questions while taking the clinical history. | 1+2=3 |
| 4. | a) | What is body condition score? How will you measure skin fold test and interpret it? | 1+2=3 |
| | b) | Define physical examination and classify it. | 1 |
| | c) | Briefly discuss the clinical and paraclinical examination procedures of lungs and pleura of goat. | 2 |

SECTION-B

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|----|-----------------------------------|---|-------|
| 5. | a) | Define demeanour and temperature. | 1 |
| | b) | Enlist different demeanour with appropriate disease example of an animal. | 2 |
| | c) | Briefly describe the diagnostic procedures of foreign bodies in reticulum through physical examination. | 3 |
| 6. | a) | Define auscultation. Enumerate the adventitious sounds of lungs with possible interpretation. | 1+2=3 |
| | b) | Write down the clinical examination procedures of rumen and liver. | 3 |
| 7. | a) | Distinguish the following terms:
i. Fat and obesity ii. Thin and cachexia iii. Bright animal and sick animal | 3 |
| | b) | Define prognosis. Write down the principles of treatment of a patient in veterinary medicine. | 1+2=3 |
| 8. | Write short notes on (any three): | | 3x2=6 |
| | a) | Paracentesis | |
| | b) | Testing for visual acuity | |
| | c) | Breathing inhibition test | |
| | d) | Palpation findings | |

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

SECTION-A

1. a) Briefly describe the milking and milk marketing systems of backyard dairy farming system in Bangladesh. 4.0
b) Point out the factors to be considered for selecting the appropriate genotype of the dairy cow for profitable dairy farming in Bangladesh. 3.0
2. a) What are the factors to be considered for feeding cattle for fattening purpose? 5.0
b) State the inclusion level of different types of feedstuffs in a beef fattening ration. 2.0
3. a) Sketch the milk let down mechanism of a dairy cow. 4.0
b) How will you train a first calver buffalo milk cow? 3.0
4. a) Describe the effect of "wallowing" or "water sprinkling" on the growth of buffalo heifer. 4.0
b) What is the worst source of replacement heifer and why? 3.0
5. a) Tabulate the age of feeding colostrum, whole milk, skim milk, milk replacer, calf starter and concentrate feed in cattle. 3.0
b) What care should be taken for the buffalo cow at and immediately after calving? 4.0
6. a) How do high temperature and humidity affect milk yield in high yielding crossbred dairy cattle in the tropics? 3.0
b) How should you manage heat stress in commercial dairy farms? 4.0

SECTION-B

7. a) State the main feeding problems of draft animal. 4.0
b) What are the points to be considered to make sure a draft animal healthy? 3.0
8. a) Do you think specialized beef cattle farming will be prospective for Bangladesh? Justify your arguments. 3.0
b) How should you manage periparturient disorders in dairy cattle? 4.0
9. a) What are the major constraints of buffalo production in Bangladesh and how should you overcome them? 3.0
b) How should you improve the reproductive efficiency of river type buffalo available in Bangladesh? 4.0
10. a) Using available feed ingredients, how should you formulate a least-cost ration for the high yielding dairy cows? 3.0
b) Discuss the nutrition management practices of a female calf from day old up to replacement heifer. 4.0
11. a) What are the existing major constrains of sustainable dairy development in Bangladesh? 3.0
b) How should you ensure the year-round availability of feeds, fodders and forages for the dairy cows? 4.0
12. Write short notes on (any four): 4x1.75=7
 - a) Prospects of buffalo farming,
 - b) Constrains of organic farming,
 - c) Climate change and livestock,
 - d) Urea feeding and reproductive impairments,
 - e) Nutrition reproduction interactions and
 - f) Record keeping for efficient dairying

Chattogram Veterinary and Animal Sciences University

DVM 3rd Year 1st Semester Final Examination-2022

Course Title: Virology (Theory)

Course Code: VIR-301

Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer ~~four~~^{three (3)} question from each section where question number 1 and 5 are compulsory. Use separate answer script for each section. Fractions of the questions are encouraged to answer together.)

SECTION-A

1. a) Define capsid, virion, tegument and envelope. 2.0
b) What is the basis of modern viral classification? 2.0
c) Discuss about the scope of virology. 3.0
d) Illustrate viral inactivation method. 4.0

2. a) Avian Influenza virus undergoes lots of mutation-why? 2.0
b) Explain the role of segment of 6,7 and 8 in case of AIV. 3.0
c) What are the criteria of OIE in determining of HPAIV. 3.0
d) What is the basis of typing of influenza virus? 1.0
e) Explain the pathogenesis of AIV. 3.0

3. a) Differentiate Marek's disease virus from Lymphoid Leukosis virus. 4.0
b) Write down the pathogenesis of Marek's disease virus. 3.0
c) Explain different form^s of Marek's disease. 2.0
d) List clinical signs and lesions of ILT in chicken and Duck plague viral disease. 3.0

4. a) Define interferon. 1.0
b) How does interferon interfere with viral replication? 3.0
c) Mention the salient features of interferon. 3.0
d) Elucidate viral purification process. 5.0

SECTION-B

5. a) Enlist the viral disease of cattle and sheep with family, symmetry, sense, DNA/RNA, envelop/naked and location of replication in a cell. 11.0

6. a) Illustrate the contributions of six (6) scientists in the field of virology. 4.0
b) Explain virus spread within host. 4.0
c) Explain virus and cell interactions. 4.0

7. a) Compare among different lymphoproliferative diseases of poultry. 2.0
b) Mention rabies like virus. 2.0
c) Differentiate between fixed virus from street rabies virus. 3.0
d) Differentiate between fowl pox virus from chicken pox virus 5.0

8. a) What are the samples should be taken for diagnosis of FMD? 3.0
b) Why vaccine is not found so effective against FMD? 2.0
c) What are the sequelae of FMD affected cattle? 3.0
d) Differentiate among different vesicular disease in domestic animal species. 2.0
e) Differentiate ring vaccination from blanket vaccination. 2.0

Chattogram Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination-2022
Course Title: Veterinary Entomology (Theory)
Course Code: VEN-301
Full Marks: 35, Time: 2 Hours

(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 are encouraged to answer together.)

SECTION-A

1. a) What is 'metamorphosis'? Classify 'metamorphosis' with appropriate examples. 3
 b) Differentiate the sub-order Nematocera, Brachycera and Cyclorrhapa based on their morphological features. 2

2. a) Write down the scientific name of the vector transmitting the following diseases. 0.5X6=3.0
 i) Anthrax ii) Babesiosis iii) Q-fever iv) Humpsore
 v) Carrion's disease
 b) Explain the term 'tick paralysis'. Which biological activity of ticks cause the most deleterious effects on its hosts-give your opinion with justification. 3

3. a) How does the morphological features of flea help them to get more benefit over a host. 3
 b) Explain how the causal agent of 'Bubonic plague' is transmitted from rat to human. 3

4. a) Write short note on any two (2) of the following: 3x2=6.0
 i) Myiasis
 ii) Pediculosis in sheep
 iii) 'Air Sac' mite infestation in lovebirds

SECTION-B

5. a) Define 'arthropods'. Briefly describe the structure of the body wall of a typical arthropods. 3
 b) What are the possible methods of disease transmission by arthropod vector. 3

6. a) Write down the vector importance of the following arthropods. 0.5X6=3.0
 i) *Haemaphysalis bispinosa* ii) *Simulium* sp iii) *Anopheles vagus*
 iv) *Culicoides* sp v) *Glossina palpalis* vi) *Chrysops dispar*
 b) Write down the life cycle and pathogenic significance of a fly responsible for causing 'false gid disease' in sheep. 3

7. a) How will you morphologically identify the following arthropods in a clinical parasitology laboratory? 0.5X6=3.0
 i) *Aedes aegypti* ii) *Dermacentor andersoni* iii) *Musca domestica*
 iv) *Sarcoptes scabies* v) *Gasterophilus intestinalis* vi) *Phlebotomus palpalis*
 b) Write down the differentiating features of different genera under the family 'Tabanidae' 3

8. a) Define 'vector' and 'vector competency'. Classify vectors with appropriate examples. 3
 b) Briefly describe the non-chemotherapeutic measures of tick control. 3

Chattogram Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination-2022
Course Title: Dairy Microbiology (Theory)
Course Code: DMC-301
Full Marks: 35, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer any **three (3)** questions from each section where question number **5 (five)** is compulsory. Use separate answer script for each section. Fractions of question are encouraged to answer together.)

SECTION-A

1. a) Define Dairy Microbiology. Write the importance of Dairy Microbiology. 1+1 = 2
b) Mention the name of important bacterial family with examples found in milk and milk products. 2.0
c) Classify lactobacteriaceae family with examples. 2.0
2. a) What do you mean by milk-borne disease? 1.0
b) State one of the most important organisms for milk-borne disease with its sign, symptoms, prevention and control. 3.0
c) How do you prevent milk-borne infectious diseases? 2.0
3. a) Explain the significance of yeast and mold in milk and milk products. 2.0
b) Briefly describe the problems of thermophilic bacteria in milk. 2.0
c) Mention the different types of thermophilic bacteria. 2.0
4. Write short notes on (any three) 3×2 = 6
a) Microbiology of milk b) Microbiology of cheese
c) Microbiology of ice-cream d) Microbiology of butter
e) Microbiology of milk powder

SECTION-B

5. a) What is starter culture? Write down the criteria of a good starter culture. 1.0
b) Describe reasons behind the insufficient development of acidity of lactic culture. 2.0
c) Mention the causes of insufficient flavour development in starter culture with their possible remedies. 2.0
6. a) How fluid milk can be affected by psychophilic bacteria? 2.0
b) Mention the types and sources of psychophilic bacteria. 2.0
c) How can you control the psychophilic bacteria? 2.0
7. a) What do you mean by HACCP? 1.0
b) State the principles of HACCP. 2.0
c) Briefly describe the logical sequences for the application of HACCP for fluid milk. 3.0
8. a) Define probiotics with examples. 1.0
b) Briefly describe the health benefits of probiotics. 3.0
c) What are the problems of coliform bacteria in the field of dairy industry in Bangladesh and how will you control it? 2.0

(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 are encouraged to answer together.)

SECTION-A

1. a) What do you mean by AWaRE? Briefly describe the AWaRE categorization of the antibiotics by WHO. 4
- b) Define antibiotic, prebiotic and probiotic. How do antibiotics kill bacteria without harming the animal cells? 4
- c) Classify penicillin with examples. Why does penicillin not act against gram negative bacteria? 3
2. a) What is the importance of "Shuttle Schedule" in anticoccidial treatment? Prepare a shuttle schedule for a layer farm. 3
- b) Enlist the drugs that have fibrinolytic and antiplatelet effect. 3
- c) Classify antifungal drugs with examples. Write down the mode of action and indications of griseofulvin in livestock. 3
- d) A Persian cat with a sudden onset of hind limb paresis/paralysis, vocalization and pain was admitted to the surgery clinic of SAQTVH. A full case history was obtained and clinical, orthopedic, neurologic, radiographic, electrocardiographic and echocardiographic examination was performed for the cat and the vet doctor initially confirmed its as an aortic thromboembolism case with cardiomegaly been observed in lateral radiography. Please provide the name of principal drugs with their mode of action and doses in this particular case. 3
3. a) Define hirsutism. Write down the cause and treatment of it 3
- b) How do piperazine and levamisole work against ascariasis in calf? "levamisole act as an immune modulator"-Justify this statement. 3
- c) Enlist 10 market preparation of herbal drugs with their indications 3
- d) Describe the proper use of corticosteroid drugs in livestock. Why are they called lifesaving drugs? 3
4. a) Differentiate between antiseptics and disinfectants. Write down the mode of action of H_2O_2 and acridine derivative. 4
- b) Write down the factors influencing degree of absorption of Calcium. 4
- c) Briefly describe the role of vitamin D in Calcium absorption 4

SECTION-B

5. a) Why clofenac and diclofenac are banned in food animal practice. 2
- b) Classify protein synthesis inhibitor antibiotics. Briefly describe about the therapeutic application of tetracycline. 3
- c) What is AMR? How does an antibiotic develop resistance to bacteria? 3
- d) A cow is been suffering from recurrent bloat. The cow gets transient relief after using anti-bloating agent but the bloat reoccurs. A veterinarian told the owner to send the feces sample to the parasitology lab, CVASU and the test confirmed that there are the presences of *Paramphistomum spp* egg in the feces. Which drug can be used to kill that worm? Write down the pharmacology with the dose of this drug. 3
6. a) Describe the effect of cardiac glycoside on Na^+/K^+ ATPase. Give your idea how this mechanism being regulated to muscle contraction in a congestive heart failure (CHF) animal. 4
- b) Describe the mechanism of actions, indications and contraindications of bacitracin. 4
- c) Enlist four ecto-parasiticidal drugs and describe their mechanism of action. 4
7. a) Which antihistaminic drugs are commonly use in veterinary practices? Mention their generic name, trade name and dose. 4
- b) Why chloramphenicol is not used parenterally in animals? Write down the pharmacology of florfenicol. 4
- c) Write down the major receptors, its locations and pharmacological effect of eicosanoids. 4
8. a) What is hormone? Classify hormones with examples. 4
- b) Briefly describe the mode of action and clinical uses of GnRH and $PGF_{2\alpha}$ in cow. 4
- c) Write down the principles and limitation of use of steroid hormone. 4

Chattogram Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination-2022
Course Title: Animal Breeding (Theory)
Course Code: ABR-301
Full Marks: 35, Time: 2 Hours

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

SECTION-A

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|----|----|--|-----|
| 1. | a) | What is Animal Breeding? Why does the Animal Breeding is important for the improvement of a trait of animal. | 1.5 |
| | b) | Who was Robert Bakewell? Illustrate how he derived the basic principles of animal breeding from his own animal experiment. | 2.5 |
| | c) | Explain the cattle breeding policy of Bangladesh. | 1.0 |
| 2. | a) | Define trait. State different types of traits with example(s) | 1.5 |
| | b) | Explain the term heritability. Justify, heritability value is connected into all breeding experiment. | 3.0 |
| | c) | Proof that inbreeding increases the rate of heterozygosity. | 1.5 |
| 3. | a) | Explain the term selection differential. | 1.0 |
| | b) | Briefly describe the procedure of estimating genetic merit of a dairy bull from the progeny testing selection scheme. | 5.0 |
| 4. | a) | Explain the term genetic gain. State the factors those are enhance the rate of a genetic gain for a given trait. | 2.0 |
| | b) | Narrate how will you estimate rate of genetic gain for milk production using bull to cow and cow to bull pathway of selection. | 4.0 |

SECTION-B

- | | | | |
|----|----|---|-------|
| 5. | a) | Explain population, idealized population and effective population size. | 2.0 |
| | b) | Describe how you will develop a chicken strain for meat production. | 4.0 |
| 6. | a) | Distinguish between selection and culling. | 1.0 |
| | b) | Construct selection index using the selection criteria under the breeding objective to increase meat production from beef cattle. | 5.0 |
| 7. | a) | What is variance? Explain why additive genetic variance is more important than other genetic variance components. | 3.0 |
| | b) | Explain the term breeding value (BV). State the importance of BVs for animal breeding experiments. | 3.0 |
| 8. | | Write short notes (any three) to the followings: | 3×2=6 |
| | a) | Heterosis | |
| | b) | Inbreeding and line breeding | |
| | c) | Hardy Weinberg law and its application | |
| | d) | Intra-class correlation method of heritability estimation. | |

Chattogram Veterinary and Animal Sciences University
DVM 3rd Year 1st Semester Final Examination-2022
Course Title: Systemic Pathology (Theory)
Course Code: SPT- 301
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 are encouraged to answer together.)

SECTION-A

1. a) Briefly describe the pathogenesis of 'chemical esophagitis'. 3
b) Define 'ruminal acidosis'. Write down its pathogenesis. 4
2. a) Write down the causes of 'toxic myopathy'. 2
b) Describe the pathogenesis and pathology of a nutritional deficiency disease of skeletal muscle. 5
3. a) Define cardiac failure, acute cardiac failure and chronic cardiac failure. 3
b) Describe persistence of 'ductus arteriosus'. 2
c) What is 'brown induration' of lung? 2
4. a) Enumerate the causes and pathology of 'renal infarction'. 2
b) Describe the pathogenesis and pathology of 'white muscle disease'. 5
5. a) Define pneumonia and pneumonitis. Briefly describe the causes and pathology of 'foreign body pneumonia'. 4
b) Briefly describe the pathological conditions associated with salivary glands. 3
6. a) Write short note on any two (2) of the following:
i) Azoturia ii) Endometrial hyperplasia iii) Hardware disease

SECTION-B

7. a) What is type-I and type-II diabetes? Describe the causes and pathogenesis of 'goiter'. 4
b) Enlist the pathological conditions of upper air passage. Briefly explain 'bovine nasal granuloma'. 3
8. a) Define anemia. Classify anemia based on etiology and morphology. 4
b) Briefly explain hepatic necrosis. 3
9. a) Define 'hyperkeratosis' and 'parakeratosis'. Describe 'granulomatous dermatitis' in cattle. 4
b) Briefly explain the pathogenesis of 'pyometra' in a cow. 3
10. a) What do you understand by 'repeat breeding'? What are the etiologies of 'repeat breeding'? 3
b) Write down the pathogenesis of 'cryptorchidism'. 2
c) Define 'phimosis' and 'paraphimosis'. 2
11. a) Write down the etiology and pathology of 'ulcer in GIT'. 3
b) Define 'intussusception' and 'volvulus'. 2
c) What is the difference between etiology of primary and secondary bloat? 2
12. a) What is 'pathologic fracture'? 1
b) Write down the difference between renal 'rickets' and 'bran' disease. 3
c) Differentiate 'rickets' and 'osteomalacia'. Enlist the significant gross and microscopic lesions of 'rickets'. 3

Chattogram Veterinary and Animal Sciences University
DVM 3rdYear 1st Semester Final Examination-2022
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 (3)** questions from each section where question number **5 (five)** is compulsory. Use separate answer script for each section. Fractions of question are encouraged to answer together.)

SECTION-A

- | | | | |
|----|----|---|-----|
| 1. | a) | Define pure line, hybrid, parent stock, grandparent stock and strain. | 3.0 |
| | b) | Enlist the key important criteria for the selection of pure line broiler and layer. | 3.0 |
| 2. | a) | What is bio-security? How would you maintain bio-security in a breeder flock? | 3.0 |
| | b) | Discuss the embryonic development of a chick. | 3.0 |
| 3. | a) | State the hormones responsible for ovulation of egg formation. | 3.0 |
| | b) | Discuss the factors that affect chicks' quality. | 3.0 |
| 4. | a) | Mention the favourable traits of local chicken. | 2.0 |
| | b) | State the mechanism with which you can improve local chicken breed. | 2.5 |
| | c) | Distinguish between blastoderm and blastodisc. | 1.5 |

SECTION-B

- | | | | |
|----|---|---|----------------|
| 5. | a) | What is hatchery? Classify hatchery and incubator. | 2.0 |
| | b) | What is incubator and incubation? Distinguish between natural and artificial incubation. | 1.5 |
| | c) | Show the operations of a modern hatchery in a flow-chart. | 1.5 |
| 6. | a) | What is hatchability and fertility? Discuss briefly the factors that affect fertility and hatchability of egg. | 4.0 |
| | b) | Mention the incubation period of chicken, quail, duck, goose, Chinese fowl, ostrich and pea fowl. | 2.0 |
| 7. | a) | What is commercial layer and parents stock layer? State the management strategies of breeder stock that differ from commercial layer. | 4.0 |
| | b) | Mention the good vigor characteristics of selecting breeder (rooster). | 2.0 |
| 8. | Give short notes: any four (4) of the following | | 4×1.5
= 6.0 |
| | a) | Challenge feeding | |
| | b) | Candling | |
| | c) | Spiking | |
| | d) | Fumigation | |
| | e) | Storage of hatching egg | |
| | f) | Reciprocal recurrent selection | |
| | g) | Physiological zero | |