

Chittagong Veterinary and Animal Sciences University
DVM 1st Year 1st Semester Final Examination-2018
Course Title: Histology & Embryology (Theory)
Course Code: HEM-101
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. Split answer is discouraged)

SECTION-A

1. a) Why the nuclei take blue color and cytoplasm usually take pink colour in Hematoxylin and Eosin staining? 2
- b) What do you mean by endothelium and mesothelium? 2
- c) Which types of lining epithelium are found in the following organs and tissues? 3
 - (i) Urinary bladder
 - (ii) Renal pelvis
 - (iii) Artery
 - (iv) Duodenum
 - (v) Bronchus
 - (vi) Rumen
2. a) Classify the connective tissue in sketch form. 2
- b) Differentiate three types of connective tissue fibres in sketch form. 3
- c) Classify the epithelia based on mode of secretion with example. 2
3. a) Enlist the membranous and non membranous organelles of an animal cell. Mention the functions of golgi complex, lysosome and mitochondria. 5
- b) How ribosomes play role in protein synthesis? 2
4. a) Write a short note on epithelial cellular adhesions or junctions with diagrams. 3
- b) Show the process of erythrocytes formation in sketch form. 4
5. a) List the cells of bone. Briefly describe haversian system with figure(s). 4
- b) Differentiate between loose and dense connective tissue. 3
6. a) Define fertilization and mention the different stages of fertilization. 2
- b) Differentiate between male gamatogenesis and female gamatogenesis. 3
- c) Define zygote, cleavage and gastrulation. 2

SECTION-B

7. a) Write down the criteria of epithelial tissue and muscular tissue. Classify the epithelial tissue based on cellular morphology. 3
- b) List the cell of connective tissue. Briefly describe fibroblast, plasma cell and adipocyte. 4
8. a) Briefly describe the histology of the skeletal muscle. 3
- b) Draw and label pseudo-stratified ciliated columnar epithelia and transitional epithelia with their location in the body. 4
9. a) Briefly describe the intracartilagenous ossification. 4
- b) Write down the importance of mitosis and meiosis cell division in animal body. 3
10. a) Draw and label leucocytes with identifying criteria under microscope. 5
- b) Draw and label the fluid mosaic model of cell membrane. 2
11. a) Draw and label sarcomere. 2
- b) Differentiate between cilia, flagella and microvilli with diagram(s). 3
- c) Differentiate between hyaline and elastic cartilage histologically. 2
12. a) What are the embryonic germ layers? Write down the major derivatives of these. 4
- b) Classify the glandular epithelium according to the type of secretion with figure(s). 3

Chittagong Veterinary and Animal Sciences University
DVM 1st Year 1st Semester Final Examination-2018
Course Title: Basic & Circulatory Physiology (Theory)
Course Code: BCP-101
Full Marks: 35, Time: 2 Hours

(Answer any **Six (6)** questions taking **three** from each section. Question no **Five (5)** is compulsory.
Fractions of the question must be answered together.)

SECTION-A

1. a) Name different structures of a typical animal cell. 2
b) List the molecules that can get through the cell membrane directly? Draw and label a cell membrane. 2
c) What is cytoskeleton? Why cell is called basic unit of life? 2
2. a) Explain the importance of Na⁺-K⁺ pump in the body. 2
b) Differentiate the followings. 2
(i) Channel protein and Carrier protein
(ii) Simple diffusion and Facilitated diffusion
c) Mention the name of plasma membrane protein. Why inside of a cell is negative? 2
3. a) List the name of hemopoietic organs. Show the genesis of erythrocyte production. 3
b) Write the functions of cellular components of blood. 3
4. a) State the procedures for plasma and serum collection. 2
b) Write the circulating life of different leukocytes. 2
c) List the functions of platelet. What are the factors that increased blood clotting time? 2

SECTION-B

5. a) Name body fluids with their location. 1
b) Write down the mechanism of lymph formation in sketch form. 2
c) What is pulmonary circulation? Write the functions of atrio-ventricular valves. 2
6. a) What is hemostasis? Sketch the basic mechanism of blood coagulation. 2
b) Briefly discuss the defensive properties of leukocyte. 2
c) Define the following terminology: 2
(a) Hemopoiesis (b) Homeostasis
(c) Hemolysis (d) Plasmolysis
7. a) List the circulations exist in the body. 2
b) Briefly discuss about hepato-portal circulation. 2
c) What are the conductive tissues of heart? Why SA node is called pace maker of the heart? 2
8. a) Classify blood vessels with example. 2
b) How heart sound is produced? Briefly discuss the myogenic theory of heart beat. 2
c) List the name of RE cells with their physiological role. 2

Chittagong Veterinary and Animal Sciences University
DVM 1st Year 1st Semester Final Examination-2018
Course Title: Communicative English (Theory)
Course Code: ENG-101
Full Marks: 35, Time: 2 Hours

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

SECTION-A

1. Change the voice of the following sentences: 5
 - a) His behavior surprised me.
 - b) The police ordered the criminal to be shot.
 - c) Doesn't Rumi prepare his lesson daily?
 - d) Don't ask me the question.
 - e) Which book do you want?

2. In recent years there have been many alarming reports that the world's climate is under going a significant change. Climatologists predict that by midway through the next century temperature may have risen by as much as 4⁰c. Now write a letter to the editor of an English daily encouraging people how to prevent it by being careful and raising public awareness. 7

3. Write a paragraph of about 150 words on "Abuse of cinema" 5

SECTION-B

4. Correct the following sentences if they are incorrect. If the sentence is correct, Just copy it. 5
 - a) The president with the prime minister and cabinet members are supposed to attend the meeting.
 - b) If I had enough money, I would not have asked for your help.
 - c) It is I who is to blame for the failure.
 - d) The problem in our rooftop garden are ants.
 - e) At present, students are used to spending their free time surfing the internet.

5. Complete the following sentences: 5
 - a) If I knew the _____ would be coming, _____.
 - b) It's long since _____.
 - c) It is the internet that is _____.
 - d) In order to change the world, _____.
 - e) _____ provided that everything goes well.

7. Read the passage carefully and answer the questions that follow: 8
 - a) Bats have a problem: how to find their way around in the dark. They hunt at night, and cannot use light to help them find prey and avoid obstacles. You might say that this is a problem of their own making, one that they could avoid simply by changing their habits and hunting by day. But the daytime economy is already heavily exploited by other creatures such as birds. Given that there is a living to be made at night, and given that alternative daytime trades are thoroughly occupied, natural selection has favored bats that make a go of the night hunting trade. It is probable that the nocturnal trades go way back in the ancestry of all mammals. In the time when the dinosaurs dominated the daytime economy, our mammalian ancestors probably only managed to survive at all because they found ways of scraping a living at night. Only after the mysterious mass extinction of the dinosaurs about 65 million years ago were our ancestors able to emerge into the daylight in any substantial numbers.

 - b) Bats have an engineering problem: how to find their way and find their prey in the absence of light. Bats are not the only creatures to face this difficulty today. Obviously, the night flying insects that they prey on must find their way about somehow. Deep-sea fish and whales have little or no light by day or by night. Fish and dolphins that live in extremely muddy water cannot see because, although there is light, it is obstructed and scattered by the dirt in the water plenty of other modern animals make their living in conditions where seeing is difficult or impossible.

- c) Give the questions of how to manoeuvre in the dark, what solutions might an engineer consider? The first one that might occur to him is to manufacture light, to use a lantern or a searchlight. Fireflies and some fish (usually with the help of bacterial) have the power to manufacture their own light but the process seems to consume a large amount of energy. Fireflies use their light for attracting mates. This doesn't require a prohibitive amount of energy: a male's tiny pinprick of light can be seen by a female from some distance on a dark night since her eyes are exposed directly to the light source itself. However, using light to find one's own way around requires vastly more energy, since the eyes have to detect the tiny fraction of the light that bounces off each part of the scene. The light source must, therefore, be immensely brighter if it is to be used as a headlight to illuminate the path, than if it is to be used as a signal to others. In any event, whether or not the reason is the energy expense, it seems to be the case that with the possible exception of some weird deep-sea fish, no animal apart from man uses manufactured light to find its way about.
- d) What else might the engineer think of? Well, blind humans sometimes seem to have an uncanny sense of obstacles in their path. It has been given the name 'facial vision', because blind people have reported that it feels a bit like the sense of touch, on the face. One report tells of a totally blind boy who could ride his tricycle at good speed round the block near his home, using facial vision. Experiments showed that, in fact, facial vision is nothing to do with touch or the front of the face, although the sensation may be referred to the front of the face, like the referred pain in a phantom limb. The sensation of facial vision, it turns out, really goes in through the ears. Blind people, without even being aware of the fact, are actually using echoes of their own footsteps and of other sounds, to sense the presence of obstacles. Before this was discovered, engineers had already built instruments to exploit the principle, for example, to measure the depth of the sea under a ship. After this technique had been invented, it was only a matter of time before weapons designers adapted it for the detection of submarines. Both sides in the second World War relied heavily on these devices, under such codenames as Asdic (British) and Sonar (American), as well as Radar (American) or RDF (British), which uses radio echoes rather than sound echoes.
- e) The Sonar and Radar pioneers didn't know it then, but all the world now knows that bats, or rather natural selection working on bats, had perfected the system tens of millions of years earlier, and their 'radar' achieves feats of detection and navigation that would strike an engineer dumb with admiration. It is technically incorrect to talk about bat 'radar', since they do not use radio waves. It is sonar. But the underlying mathematical theories of radar and sonar are very similar, and much of our scientific understanding of the details of what bats are doing has come from applying radar theory to them. The American zoologist Donald Griffin, who was largely responsible for the discovery of sonar in bats, coined the term 'echolocation' to cover both sonar and radar, whether used by animals or by human instruments.

Which paragraph contains the following information?

Write the correct letter A--E, beside i--iv in your answer script.

NB You may use any letter more than once.

- i. examples of wildlife other than bats which do not rely on vision to navigate by
- ii. how early mammals avoided dying out
- iii. why bats hunt in the dark
- iv. how a particular discovery has helped our understanding of bats

Complete the sentences below.

Choose **NO MORE THAN TWO WORDS** from the passage for each answer.

- v. Long before the invention of radar,.....had resulted in a sophisticated radar like system in bats.
- vi. Radar is an inaccurate term when referring to bats because are not in their navigation system.
- vii. Radar and sonar are based on similar.....
- viii. The word 'echolocation' was first used by someone working as a

Chittagong Veterinary and Animal Sciences University

DVM 1st Year 1st Semester Final Examination-2018

Course Title: Gross Anatomy (Theory)

Course Code: GRA-101(T)

Total Marks: 70; Time: 3.0 hour

Figures in the right margin indicate full marks. Answer any 5 questions from separate answer script for each section.

SECTION-A

- 1 a) Define veterinary medicine and veterinary anatomy. 1
b) Describe briefly the branches and methods of study of anatomy. 2
c) What do you mean by following topographic terms using for the description of anatomy (any four): i) Palmar ii) Plantar iii) Rostral iv) Medial v) Lateral vi) Profundus (1x4)=4
- 2 a) Classify the vertebral column with few specific characteristics. 2
b) Draw and level a long bone. 2
c) Differentiate long bone from flat bone. 3
3. a) Enlist the digestive glands of an ox. 2
b) Describe mucosa of the compound stomach of cattle. 3
c) Enlist the cartilages of larynx of cattle. 2
4. a) Write down the course and relation of trachea. 3
b) How you will differentiate right lung from left lung of an ox? 2
c) Enlist the muscles of abdominal press. 2
5. a) Classify joint according to mobility. 2
b) How a stifle joint is formed? Describe the ligaments of a stifle joint of cattle. 3
c) Define tendon and ligament. 2
6. a) Write down the anatomy of the muscles of the lateral aspect of the thigh region. 3
b) Write down the anatomical short note on followings. (2x2)=4
(i) Linea alba (ii) Inguinal canal

SECTION-B

7. a) Briefly describe the anatomy of the liver of cattle. 5
b) Draw and label the stomach of a goat with location. 2
8. a) How to from the jugular furrow and mention its location and contents. 2
b) Briefly describe the anatomy of the abdominal wall with especial emphasis on fibers direction and relationship to each other. 5
9. a) Briefly describe the anatomy of the pancreas of a goat mention the opening side of the pancreatic duct. 4
b) Enlist the muscles of brachium and ante-brachium region of cattle. 3
10. a) Define skeleton and enumerate the bones of the axial skeleton. 2
b) Give the boney boundary of the pelvic cavity of cattle. 2
c) How do you differentiate the pelvic girdle between ox and cow? 2
d) Write down the vertebral formula of cattle and horse. 1
11. a) Enlist the serous membranes of the body cavities. 2
b) Write down the boundary of abdominal cavity. 2
c) Write a short note on peritoneum. 3
12. Write short note on (any two) (3.5x2)=7
(i) Pericardium
(ii) Diaphragm
(iii) Ligamentum nuchae
(iv) Muscles of tail of a cattle

Chittagong Veterinary and Animal Sciences University
DVM 1st Year 1st Semester Final Examination-2018
Course Title: Animal Science (Theory)
Course Code: ANS-101
Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer **three** questions from each section. Where Question no **1 and 5** are compulsory. Use separate answer script for each section.)

SECTION-A

1. a) Mention the name of some important farm animals with their utilities. 3
b) Differentiate ruminants and non-ruminants with example. 3
c) Write down the zoological classification of cattle, horse, dog and cat. 5
2. a) What are the constraints for livestock development in Bangladesh? 3
b) What is breed? Classify sheep breeds with examples on the basis of their utility. 4
c) Write down the distribution and characteristics of Jamnapari goat and Red Chittagong cattle. 5
3. a) Define "farm management" and "manager". 3
b) What are the routine operations and management procedures found in a dairy farm? 4
c) Describe shortly about the duties and responsibilities of a livestock farm manager. 5
4. a) "Buffalo known as triple purpose animal" explain yourself. 3
b) How can you differentiate between river buffalo and swamp buffalo? 4
c) Give a detail description about the buffalo breed "Murrah" 5

SECTION-B

5. Define following terms (any eleven): 11
 - i) Brood mare
 - ii) Steer
 - iii) Goatling
 - iv) Chatters
 - v) Crone
 - vi) Trumpets
 - vii) Farrowing
 - viii) Grunting
 - ix) Pullet
 - x) Gimmer
 - xi) Rig
 - xii) Colt
 - xiii) Mule
 - xiv) Hog
6. a) Shortly describe about different conditions for domestication of animal. 3
b) Compare between domesticated and feral animals. Why domestication of animals took place at earlier stage? 4
c) Enumerate the consequences of domestication of farm animals. 5
7. a) Mention the name of different types of houses found in an ideal dairy farm. 3
b) Shortly describe about the milk cow shed with standard space requirement for head to head and tail to tail system. 4
c) What are the factors that should be considered for selecting a site of an ideal dairy or goat farm? 5
8. Write short notes (any three): 3×4=12
 - i) Characteristics of "artiodactyla" family
 - ii) Important breeds of dog
 - iii) Green roughage vs dry roughage
 - iv) Common vices of farm animals
 - v) Signs of estrus of cow

Chittagong Veterinary and Animal Sciences University
DVM 1st Year 1st Semester Final Examination-2018
Course Title: Rural Sociology & Anthropology (Theory)
Course Code: RSA-101 (T)
Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any four questions from each section. Where Question no **1 and 6** are compulsory. Use separate answer script for each section.)

SECTION-A

1. a) Define Rural Sociology. 1.0
b) Write down the advantages of Rural Sociology. 3.0
c) Discuss the relationship between Rural Sociology and Veterinary Science. 4.0
2. a) Define Social problem. 2.0
b) How many kinds of social problems in our society? 2.0
c) Briefly discuss any two of social problems in context of Bangladesh with their possible solutions. 5.0
3. a) Define culture. 1.0
b) Discuss the characteristics of culture. 3.5
c) "Animal welfare is related to culture, religion and ethics"- discuss. 4.5
4. a) Resource – Explain the term. 1.0
b) What are the characteristics of society? 2.0
c) What is ecology? Write down the types of resources. 1+4=5.0
5. a) Define the concept food chain. 2.0
b) Show that population in Bangladesh has crossed the limit of critical level of food chain. 5.0

SECTION-B

6. a) Define Anthropology. How many kinds of Anthropology? 2+2=4.0
b) Define kinship. What are the types of kinship? 2+2=4.0
7. a) What is social survey? 1.0
b) Write the objective of social survey. 3.0
c) Briefly discuss the steps for conducting a social research. 5.0
8. a) What is personality? 2.0
b) Narrate the factors of human development. 3.0
c) How many steps of behavior? 4.0
9. a) How social activities are related to environmental pollution? 2.0
b) Discuss the major causes of environmental pollution in Bangladesh. 7.0
10. Write short notes on the following (**any three**): 3×3=9
a) Socialization.
b) Social Value
c) Cultural lag.

Chittagong Veterinary and Animal Sciences University
DVM 1st Year 1st Semester Final Examination-2017
Course Title: Animal Science (Theory)
Course Code: ASM-101
Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any three (5) questions from each section where question no. 1 & 5 are compulsory. Use separate answer script for each section)

Section-A

1. a) Elaborate the following terms: 4.0
(i) Mule (ii) Free martin (iii) Ration
(iv) Stable (v) Heifer (vi) Sire
(vii) Mare (viii) Mare (ix) Lamb
- b) Show the latest livestock and poultry population statistics and their contribution to GDP in Bangladesh. 3.0
- c) Describe the physical characteristics and production traits of Black Bengal goat. 4.0
2. a) Differentiate breed from type. Classify cattle breeds with example. 4.0
b) Briefly discuss three important cattle breeds. 4.0
c) Differentiate *bos taurus* from *bos indicus*. 4.0
3. a) Draw and label a double row face out system stanchion barn with measurements. 4.0
b) What are the different types of house usually found in an ideal sheep farm? 4.0
c) Discuss the criteria for selection of site for an ideal dairy farm. 4.0
4. a) Briefly discuss the daily routine for management works in a dairy farm. 4.0
b) What are duties and responsibilities of a livestock farm manager? 4.0
c) Briefly discuss different body condition scores in a dairy herd. 4.0

Section-B

5. a) Show the zoological classification of horse and dog. 3.0
b) Mention the characteristics of different families of farm animals. 4.0
c) Classify feedstuff with example. Differentiate roughage from concentrate. 4.0
6. a) Write down the importance of sheep and goat. Classify goat according to example. 4.0
b) Compare different body parts of cattle and horse. 4.0
c) Describe Saanen, Alpine and Beetal breeds of goat. 4.0
7. a) What are the common vices of farm animals? How should you overcome them? 4.0
b) Classify dog breeds. Briefly discuss the German Shepherd and Labrador Retriever breeds of dog. 4.0
c) Briefly discuss the American Landrace, Yorkshire and Poland China breeds of swine. 4.0
8. a) Write short notes (Any three) on: 3x4= 12.0
(i) Greenhouse effects on livestock production
(ii) Origin, domestication and distribution of farm animals
(iii) Red Chittagong cattle
(iv) Loose housing system