

Chattogram Veterinary and Animal Sciences University

DVM 1st year 1st Semester Final Examination 2021

Course Title: Basic and Circulatory Physiology (Theory)

Course Code: BCP-101 (T)

Full Marks: 35, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer **Three (3)** questions from each section, where question No. **1** and **5** are compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

1. a) There are two types of cells based on the presence of true nucleus. Do you know the names of them? If so, please cite the points by which they are different from each other. 4
b) "Lysosome is cellular organelle that is responsible for protein synthesis"- Justify this statement with your opinion. 2
2. a) Differentiate between action potential and membrane potential. 2
b) Write down the role of Na⁺ and K⁺ pump for maintaining the cell volume. 2
c) Mitochondria are the power house of cell-Justify this statement. 2
3. a) Write down the importance of isotonic solution. 2
b) State the basic differences between animal and plant cell. 2
c) What is cerebrospinal fluid? Sketch the course of CSF? 2
4. Differentiate between the following terms (**any three**): 3×2=6
a) Exocytosis and Endocytosis
b) Active transport and Osmosis
c) Homeostasis and Hemostasis
d) Serum and Plasma

SECTION-B

5. a) Mature red blood cell alive without nucleus-How? 1
b) Membrane potential is essential to survival of all living creatures-justify. 2
c) Define blood. Briefly state the steps of haemoglobin synthesis. 2
6. a) Sketch the fetal circulation in brief form. 2
b) Define blood pressure. Briefly describe the nervous control of blood pressure. 4
7. a) Suppose you are provided with N/10 HCl with 20µl of blood for haemoglobin estimation. After mixing the blood with N/10 HCl, hemolysis occurred. Do you have any idea about what type of solution is N/10 HCl based on osmotic pressure? If you want to prevent hemolysis, in what type of solution would you like to mix the blood? 2
b) What are the steps required for development of leukocytes in the infected area outside the blood vessels? Please explain these steps. 2
c) Which vitamin and mineral play a vital role in blood coagulation and how do they do that? 2
8. a) Please explain about special conductive tissues of heart. 4
b) What are the theories of heart beat? Which theory is most acceptable and why? 2

Chattogram Veterinary and Animal Sciences University

DVM 1st year 1st Semester Final Examination 2021

Subject: Gross Anatomy-I (Theory)

Course Title: GRA -101 (T)

Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any **Five (5)** questions from each section, Use separate answer script for each section. Fractions of the questions must be answered together)

SECTION-A

1. a) Define skeleton. State examples of exoskeleton. 2.0
b) Classify the bones of an animal according to their shape and function. 3.0
c) Define the following terms- i) Rostral, ii) Abaxial, iii) Palmar, iv) Sagittal plane 2.0
2. a) How thoracic girdle and pelvic girdle is formed? 4.0
b) Define an articulation. Write down the components of an articulation. 3.0
3. a) What is porta hepatis? 1.0
b) Enumerate the lobes of liver of ox and explain the impressions of it? 3.0
c) Give the anatomical location of pancreas, rumen and omasum of an ox. 3.0
4. a) Enlist the organs of respiratory system of ox. 1.0
b) Define mediastinum. What are the differences between right and left lung of a goat? 4.0
c) Which organ is common for respiratory and digestive systems?. Mention it's openings. 2.0
5. a) How the thoracic cage is formed? 2.0
b) Enlist the cartilages of larynx of a goat. 2.0
c) Write down the openings of a diaphragm with their contents. 3.0
6. a) What do you mean by abdominal tunic? 2.0
b) Define flank and mention the name of muscles of flank region with their fibre direction. 5.0

SECTION-B

7. a) Define bone and cartilage. 2.0
b) How will you differentiate the metacarpal from the metatarsal of an ox? 2.0
c) Classify and describe the anatomy of rib of a horse. 3.0
8. a) What is a vertebral column? Write down the vertebral formulae of cow and horse. 2.0
b) Draw and label a typical vertebra of an ox. 3.0
c) Write down the joints of hind limb of an ox. 2.0
9. a) Define joint and classify them. 2.0
b) Draw and label a typical synovial joint. 2.0
c) Enlist the muscles of abdomen with their fibre directions. 3.0
10. (a) Define peritoneum and linea alba. 2.0
(b) Briefly describe the diaphragm of an ox. 5.0
11. (a) Enlist the muscles of mastication and respiration. 3.0
(b) Give the origin, insertion, blood and nerve supply of any two muscles of the neck of goat. 4.0
12. (a) Briefly describe the anatomy of small intestine of an ox. 3.0
(b) Write a short note on inguinal canal in an ox. 4.0

Chattogram Veterinary and Animal Sciences University

DVM 1st year 1st Semester Final Examination 2021

Subject: Histology and Embryology-I (Theory)

Course Title: HEM -101 (T)

Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any **Five (5)** questions from each section, Use separate answer script for each section. Fractions of the questions must be answered together)

SECTION-A

- | | | | |
|----|----|--|-----|
| 1. | a) | Name 2 (two) fixatives used in the laboratory for histological slide preparation. | 1.0 |
| | b) | Briefly describe the principles of haematoxylin and eosin (H & E) dye in colouring the cellular structures. | 4.0 |
| | c) | How does lysozyme maintain the recycling system of the cell? | 2.0 |
| 2. | a) | Mention the lining epithelium of following organs:
i) Loop of henle ii) Renal Pelvis iii) Vas deferens iv) Bronchus
v) Vagina vi) Tongue | 3.0 |
| | b) | Briefly describe the pseudo stratified epithelium in animal. | 2.0 |
| | c) | How do you differentiate meiosis from mitosis? | 2.0 |
| 3. | a) | What do you mean by gland? | 1.0 |
| | b) | Classify the glands with examples. | 4.0 |
| | c) | Draw and label the epithelial tissue of trachea. | 2.0 |
| 4. | a) | Mention the location of hyaline, elastic and fibrocartilage. | 2.0 |
| | b) | Briefly describe the histology of hyaline cartilage in goat. | 3.0 |
| | c) | Draw and label an osteon of long bone. | 2.0 |
| 5. | a) | Enlist the cells found in bone and cartilage. | 2.0 |
| | b) | How do you differentiate dense connective tissue from loose connective tissue? | 2.0 |
| | c) | Draw and label the plasma cell and fibroblast. | 3.0 |
| 6. | a) | What do you mean by fertilization? | 1.0 |
| | b) | Draw and label a spermatozoon. | 3.0 |
| | c) | What are the differences between gametogenesis in male and female? | 3.0 |

SECTION-B

- | | | | |
|-----|-----|---|-----|
| 7. | a) | Define synapse. | 1.0 |
| | b) | Classify the synapse based on morphology. | 3.0 |
| | c) | What do you mean by ganglia and nucleus? | 3.0 |
| 8. | a) | Classify muscles histologically. | 1.0 |
| | b) | Define sarcomere. | 1.0 |
| | c) | How would you differentiate endomysium, perimysium and epimysium? | 3.0 |
| | d) | Differentiate perkinjee fiber from perkinjee cell. | 2.0 |
| 9. | a) | Draw and label the developmental stages of an embryo from zygote to bilamilar embryo. | 4.0 |
| | b) | Draw and label the fluid mosaic model of cell membrane. | 3.0 |
| 10. | a) | Enlist neuroglial cells found in CNS and PNS. | 2.0 |
| | b) | Describe the different types of neurons based on number of cell process. | 3.0 |
| | c) | Illustrate the myelin production in PNS. | 2.0 |
| 11. | a) | Briefly describe the developmental histology of agranulocytes in animal. | 5.0 |
| | b) | Why blood, bone and cartilage are called special connective tissue? | 2.0 |
| 12. | (a) | Differentiate three types of connective tissue fibres. | 3.0 |
| | (b) | Define bipolar and multipolar neuron. | 2.0 |
| | (c) | Write short note on goblet cell. | 2.0 |

(Figures in the right margin indicate full marks. Answer **Three (3)** questions from each section, where question No. **1** and **5** are compulsory. Use separate answer script for each section. Fractions of the questions must be answered together.)

SECTION-A

1. a) What do you mean by "Livestock"? Discuss current scenario, problems and prospect of livestock industry in Bangladesh. 4
- b) Write down the approximate number of cattle, goat, sheep and buffalo population available in Bangladesh. Is Bangladesh self-sufficient in milk and meat production? Mention the availability and deficit of milk and meat in Bangladesh. 4
- c) Write down the zoological classification of cattle, goat, sheep and buffalo. 3
2. a) Define "breed" and "variety". Write down the name of three breeds of cattle, goat, sheep and buffalo found in Indian subcontinent. 3
- b) Write down the name and origin of five major dairy and beef breeds of cattle. Briefly discuss any three of them. 5
- c) Write down the ancestors, age of sexual maturity, gestation period and litter size of common farm animals. 4
3. a) Define farm management. Write down the responsibilities of an ideal farm manager. 4
- b) Briefly discuss the common vices of farm animals with their prevention and control. 5
- c) Differentiate between *Bos taurus* and *Bos indicus* cattle. 3
4. a) "Domestication of animals was a crucial part of human history" - Explain. Write down the negative impact of domestication. 4
- b) Summarize the approximate dates and locations of the first domestication of animals. 3
- c) Write down the characteristics of Bovidae, Equidae and Felidae family. 5

SECTION-B

5. Define the following terms (any eleven): 11
i) Free martin ii) Drake iii) Mule iv) Chirp v) Yearling bull vi) Venison vii) Doe viii) Whelping ix) Dystocia x) Cryptorchid xi) Saggy xii) Tup xiii) Barrow xiv) Colt
6. a) Describe the importance of housing. Discuss different types of milch cow sheds with their advantages and disadvantages. 4
- b) Write down the points to be considered before selecting a site for establishing a farm. 4
- c) Classify the housing systems for rearing poultry. 4
7. a) Describe the breeds of goat that can produce special types of fibres resembling wool. 4
- b) "Buffalo is a triple purpose animal"- justify. Describe the most popular buffalo breed in Indian subcontinent. 4
- c) Define roughage, concentrate and TDN. List different sources of roughage and concentrate. 4
8. Write short notes on (any three) 3x4=12
i) River buffalo vs swamp buffalo
ii) Red Chittagong Cattle
iii) Quarantine shed vs Isolation shed
iv) Smart cattle housing

Chattogram Veterinary and Animal Sciences University

DVM 1st year 1st Semester Final Examination 2021

Course Title: Communicative English (Theory)

Course Code: ENG-101 (T)

Full Marks: 35, Time: 2 Hours

(Figures in the right margin indicate full marks. Answer all the questions. Use separate answer script for each section. Fractions of the questions must be answered together)

SECTION-A

1. Correct the following sentences if they are incorrect. If the sentence is correct, just copy it. 5
 - a) Gradually we are getting used to buy things online.
 - b) If he had money, he would have travelled around the world.
 - c) That the climate of the world is changing are known by all the people.
 - d) It is you who is responsible for your won action.
 - e) The price of basic necessities has gone up lately.

2. Complete the following sentences: 5
 - a) I look forward to -----
 - b) If you had gone there-----
 - c) -----after my friend had got to the market.
 - d) Let's think this issue positively so that-----
 - e) We would like you-----

3. Various drugs are indiscriminately being used in poultry and dairy farms to prevent and treat animal diseases as well as to promote growth. The residues of these toxic drugs in meat, eggs and milk are creating hazard for public health. Suppose, you are concerned about the matter; so, write a letter to the editor of an English daily stating your concern while suggesting some remedial measures. 7

SECTION-B

4. Change the following sentences as directed. 5
 - a) By whom was the dog treated? (Change the voice.)
 - b) We have been deceived. That is the truth. (Join the sentences into a complex sentence.)
 - c) The stranger said to Tom whether he (Tom) was the person that he had met the previous day. (Change the speech.)
 - d) Some students study grammar on the internet. (Change the voice.)
 - e) "I am tired," the father said "So I want to sleep now." (Change the speech.)

5. Write a paragraph of about 150 words on 'The impact of the internet on human life' 5

6. Read the passage carefully and answer the questions that follow. 8

Cork - the thick bark of the cork oak tree (*Quercus suber*) - is a remarkable material. It is tough, elastic, buoyant, and fire-resistant, and suitable for a wide range of purposes. It has also been used for millennia: the ancient Egyptians sealed their sarcophagi (stone coffins) with cork, while the ancient Greeks and Romans used it for anything from beehives to sandals.

And the cork oak itself is an extraordinary tree. Its bark grows up to 20 cm in thickness, insulating the tree like a coat wrapped around the trunk and branches and keeping the inside at a constant 20°C all year round. Developed most probably as a defence against forest fires, the bark of the cork oak has a particular cellular structure - with about 40 million cells per cubic centimeter - that technology has never succeeded in replicating. The cells are filled with air, which is why cork is so buoyant. It also has an elasticity that means you can squash it and watch it spring back to its original size and shape when you release the pressure.

Cork oaks grow in a number of Mediterranean countries, including Portugal, Spain, Italy, Greece and Morocco. They flourish in warm, sunny climates where there is a minimum of 400 millimeters of rain per year, and no more than 800 millimeters. Like grape vines, the trees thrive in poor soil, putting down deep root in search of moisture and nutrients.

Chattogram Veterinary and Animal Sciences University
DVM 1st year 1st Semester Final Examination 2021
Course Title: Rural Sociology and Anthropology (Theory)
Course Code: RSA-101 (T)
Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any four (4) questions from each section where number 1 and 7 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 sociology and society?
b) Illustrate the advantages of studying sociology as a veterinary graduate? | 3.0
2.5+2.5=5.0 |
| 2. | a) Define the concept of "Migration".
b) What are the factors responsible for migration? -Discuss. | 4.0
5.0 |
| 3. | a) What are the main social institutions in Bangladesh?
b) Illustrate the characteristics and functions of social institution? | 3.0
3+3=6.0 |
| 4. | a) How are social activities related to environmental pollution?
b) Explain the major causes of environmental pollution in Bangladesh. | 3.0
6.0 |
| 5. | a) What is social change?
b) Discuss the factors responsible for social change in Bangladesh. | 3.0
6.0 |
| 6. | Write short notes (any two)
a) Human development
b) Food chain
c) Socialization | 4.5x2=9.0 |

SECTION-B

- | | | |
|-----|---|--------------------|
| 7. | a) What is kinship? Discuss the major types of kinship.
b) Explain different types of resources. | 4.0
4.0 |
| 8. | a) Briefly discuss the steps for conducting a social research.
b) Illustrate the types of sociology methodology. | 3.0
3+3=6.0 |
| 9. | a) Write the types of social control?
b) What is public opinion? How do various agencies play role in raising public opinion? | 3.0
6.0 |
| 10. | a) Illustrate the characteristics of culture.
b) Discuss the concept of cultural lag citing with example in context of Bangladesh. | 4.0
5.0 |
| 11. | a) How many kinds of social problem and common social problems in Bangladesh?
b) What are the various types of social survey? | 2.5+2.5=5.0
4.0 |
| 12. | Write short notes (any two)
a) Urbanization
b) Social value
c) Unemployment problem | 4.5x2=9.0 |

Southern Portugal's Alentejo region meets all of these requirements, which explains why, by the early 20th century, this region had become the world's largest producer of cork, and why today it accounts for roughly half of all cork production around the world.

Most cork forests are family-owned. Many of these family businesses, and indeed many of the trees themselves, are around 200 years old. Cork production is, above all, an exercise in patience. From the planting of a cork sapling to the first harvest takes 25 years, and a gap of approximately a decade must separate harvests from an individual tree. And for top-quality cork, it's necessary to wait a further 15 or 20 years. You even have to wait for the right kind of summer's day to harvest cork. If the bark is stripped on a day when it's too cold - or when the air is damp - the tree will be damaged.

Cork harvesting is a very specialized profession. No mechanical means of stripping cork bark has been invented, so the job is done by teams of highly skilled workers. First, they make vertical cuts down the bark using small sharp axes, then lever it away in pieces as large as they can manage. The most skillful cork- strippers prise away a semi-circular husk that runs the length of the trunk from just above ground level to the first branches. It is then dried on the ground for about four months, before being taken to factories, where it is boiled to kill any insects that might remain in the cork. Over 60% of cork then goes on to be made into traditional bottle stoppers, with most of the remainder being used in the construction trade, Corkboard and cork tiles are ideal for thermal and acoustic insulation, while granules of cork are used in the manufacture of concrete.

Recent years have seen the end of the virtual monopoly of cork as the material for bottle stoppers, due to concerns about the effect it may have on the contents of the bottle. This is caused by a chemical compound called 2,4,6-trichloroanisole (TCA), which forms through the interaction of plant phenols, chlorine and mould. The tiniest concentrations - as little as three or four parts to a trillion - can spoil the taste of the product contained in the bottle. The result has been a gradual yet steady move first towards plastic stoppers and, more recently, to aluminum screw caps. These substitutes are cheaper to manufacture and, in the case of screw caps, more convenient for the user.

The classic cork stopper does have several advantages, however. Firstly, its traditional image is more in keeping with that of the type of high quality goods with which it has long been associated. Secondly - and very importantly - cork is a sustainable product that can be recycled without difficulty. Moreover, cork forests are a resource which support local biodiversity, and prevent desertification in the regions where they are planted. So, given the current concerns about environmental issues, the future of this ancient material once again looks promising.

Do the following statements agree with the information given in the Reading Passage?
Beside question number a—d on your answer sheet, write:

TRUE *if the statement agrees with the information*
FALSE *if the statement contradicts the information*
NOT GIVEN *if there is no information on this*

- a) The cork oak has the thickest bark of any living tree.
- b) Scientists have developed a synthetic cork with the same cellular structure as natural cork.
- c) Cork bark should be stripped in dry atmospheric conditions.
- d) The only way to remove the bark from cork oak trees is by hand.

Choose **ONE WORD ONLY** from the passage for each answer.

Comparison of aluminum screw caps and cork bottle stoppers
Advantages of aluminum screw caps:

- e) Do not affect the of the bottle contents.
- f) Are to produce.

Advantages of cork bottle stoppers:

- g) Made from a material.
- h) Easily