

Chittagong Veterinary and Animal Sciences University
DVM 1st Year 1st Semester Final Examination/2013
Course Title: Histology and Embryology (Theory)
Course Code: VHE-101
Full Marks: 70, Time: 3 Hours

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

Section-A

- | | | |
|---|---|---|
| 1 | a. List the organelles of animal cell and mention the function of the granular endoplasmic reticulum. | 4 |
| | b. What do you mean by "Fluid Mosaic" model in relation to cell membrane of animal cell. | 3 |
| 2 | a. Define cleavage, zygote, differentiation and histogenesis. | 2 |
| | b. Draw and label a blastocyst. | 2 |
| | c. What do you mean by gastrulation? | 3 |
| 3 | a. What are the basic tissues of the body? Differentiate between epithelial tissue and connective tissue. | 5 |
| | b. Differentiate between muscle fibre and nerve fibre. | 2 |
| 4 | a. Draw and label the epithelia found on i) Skin ii) lining of trachea. | 5 |
| | b. List the components of cartilage. | 2 |
| 5 | a. Show the histological differences among muscle fibre in a tabular form | 6 |
| | b. Define ganglia. | 1 |
| 6 | a. List cells of blood. Differentiate plasma from serum. | 2 |
| | b. Show the process of haemopoiesis in sketch form. | 5 |

Section-B

- | | | |
|----|---|---|
| 7 | a. Differentiate spermatogenesis from oogenesis in tabular form . | 4 |
| | b. Briefly describe Haversian system. | 3 |
| 8 | a. What is neuron ? Classify it based on processes. | 5 |
| | b. Define synapse. Classify it. | 2 |
| 9 | a. List the cells found in bone and cartilage. | 1 |
| | b. Briefly describe the process of intra cartilaginous bone formation. | 6 |
| 10 | a. What do you mean by extramedullary hemopoiesis? | 2 |
| | b. How a mucous membrane is formed? What is the main difference between mucous and mucin. | 2 |
| | c. Draw and label cardiac muscle. | 3 |
| 11 | a. Classify glandular epithelia based on duct system with example. | 5 |
| | b. List the derivatives of ectoderm. | 2 |
| 12 | a. List the character of connective tissue fibres with figure. | 3 |
| | b. Define neuroglia. Briefly describe CNS neuroglia. | 4 |

Chittagong Veterinary and Animal Sciences University
DVM 1st Year 1st Semester Final Examination/2013
Course Title: Rural sociology (Theory)
Course Code: RSC-101(T)
Full Marks: 55, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any three from each section. **Question 5 is compulsory.** Use separate answer script for each section.)

Section-A

- | | | |
|---|---|---|
| 1 | a) Define Rural Sociology? | 2 |
| | b) Discuss the importance of studying the Rural Sociology in Veterinary Science. | 7 |
| 2 | a) What is Social structure? | 2 |
| | b) Social structure determines human behaviour. Do you agree?- Justify. | 7 |
| 3 | a) What do you mean by eco-system? | 2 |
| | b) Explain that human existence is dependent on energy transformation between human and the rest. | 7 |
| 4 | What is research design? Briefly discuss it. | |

Section-B

- | | | |
|---|--|----|
| 5 | Animal welfare is related with cultural religion and ethics- discuss. | 10 |
| 6 | What is a resource? Briefly discuss the different kinds of resources in Bangladesh. | 9 |
| 7 | Define culture. Discuss the concept of cultural lag citing example in context of Bangladesh | 9 |
| 8 | Write short note on (any two)
i. Socialization, ii. Social stratification, iii. Factors in human development. | 9 |

Chittagong Veterinary and Animal Sciences University
DVM 1st Year 1st Semester Final Examination/2013
Course Title: Animal Science and Livestock Management-I
Course Code: ASM-101(T)
Full Marks: 70 Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any three questions from each section, where question No. **1(one)** and **5(five)** are compulsory. Use separate answer script for each section.

Section-A

- | | | |
|----|---|----|
| 1. | Define following terms (any eleven)
i) Steer ii) Sire iii) Colt foal iv) Chevon v) Gelding vi) Yearling bull vii) Heifer
viii) Buckling ix) Bleat x) Ewe xi) Sow xii) Gilt xiii) Pig let xiv) Wool xv) Lamb | 11 |
| 2 | a. Define breed. Classify sheep breeds with example. | 4 |
| | b. State the important points to differentiate <i>Bos indicus</i> from <i>Bos taurus</i> . | 4 |
| | c. Mention the important distinguishing characteristics of Red Chittagong cattle. | 4 |
| 3 | a. Give examples of five cattle, sheep, duck, goat, swine and dog breed. | 9 |
| | b. Describe briefly one dual purpose breed of cattle. | 3 |
| 4 | a. Define animal behaviour and physiology. Mention the importance of animal behaviour for management of domestic animal. | 4 |
| | b. What is cruelty to animal? Briefly discuss the important cruelty to animal. | 4 |
| | c. Discuss the main reasons for domestication of common farm animals. | 4 |

Section-B

- | | | |
|---|--|---|
| 5 | a. What is body condition score (BCS)? Write down the significance of BCS for operation of commercial dairy herd. | 4 |
| | b. What are the distinguishing features that clearly differentiate Asian camel from Arabian one? How do camels manage to survive environmental and nutritional threats in Arabian deserts? | 4 |
| | c. List the major constraints of Livestock production in Bangladesh. | 3 |
| 6 | a. Give a detail taxonomy of cattle, sheep, goat, buffalo, swine and dog. | 9 |
| | b. Which breed of dairy cattle would you recommend for Bangladesh? Justify your answer | 3 |
| 7 | a. Classify buffalo breeds giving at least five examples in each case. Mention the prospects of buffalo in Bangladesh. | 4 |
| | b. Describe Murrah, Nili-Ravi, Jaffarabadi and Bhadawari breeds of buffalo. | 4 |
| | c. List the distinguishing features between River type and Swamp type buffalo. | 4 |
| 8 | a. Classify goat breeds with example. | 4 |
| | b. Describe the Jamnapari, Angora, Kashmiri, Saanen, Merino and Rambouillet breed. | 4 |
| | c. List the measures you would like to adopt during transportation of common farm animals by road. | 4 |

4

Chittagong Veterinary and Animal Sciences University
DVM 1st Year 1st Semester Final Examination/2013

Course Title: Gross Anatomy (Theory)

Course Code: VGA-101(T)

Full Marks: 70, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer 5 (five) questions from each section. Use separate answer script for each section.)

Section-A

- | | | |
|---|--|-----|
| 1 | a) Define Veterinary Anatomy and Developmental Anatomy. | 2.0 |
| | b) Draw and label a longitudinal section of a long bone. | 4.0 |
| | c) List the visceral bones of animals and birds. | 1.0 |
| 2 | a) Define joint and classify them. | 2.0 |
| | b) Name the joints of fore limb and hind limb of an ox in successive order. | 3.0 |
| | c) Draw and label a typical synovial joint of bone. | 2.0 |
| 3 | a) Define bone and cartilage. | 2.0 |
| | b) Classify bone on the basis of shape and function. | 3.0 |
| | c) Differentiate between tendon and ligament. | 2.0 |
| 4 | a) Define mediastinum. What are the differences between right and left lung of a goat. | 4.0 |
| | b) Draw and label a bronchial tree. | 3.0 |
| 5 | a) Draw and label the visceral surface of liver of goat. | 4.0 |
| | b) Give the anatomical location of liver, gall bladder and pancreas of an ox. | 3.0 |
| 6 | a) How a common calcaneal tendon is formed? | 2.0 |
| | b) List the foramina of mandible with their contents. | 2.0 |
| | c) Name the accessory digestive organs. How they help in digestion? | 3.0 |

Section-B

- | | | |
|----|---|-----|
| 7 | a) How the thoracic girdle and pelvic girdle is formed? | 4.0 |
| | b) Define paranasal sinuses. Enlist the paranasal sinuses of an ox. | 3.0 |
| 8 | a) Define tendon and ligament. | 2.0 |
| | b) Write down the name and function of muscles of respiration and defecation. | 3.0 |
| | c) Write down the name and function of muscle of mastication. | 2.0 |
| 9 | a) Define peritoneum and linea alba. | 3.0 |
| | b) Draw and label of genital organ of bull. <i>a typical vertebra.</i> | 4.0 |
| 10 | a) Define syrinx. List the air sacs of chicken. | 3.0 |
| | b) Draw and label the digestive tract of chicken. | 4.0 |
| 11 | a) Draw and label the cross section of tail of an ox. | 4.0 |
| | b) Give the anatomical location of rumen, reticulum and omasum. | 3.0 |
| 12 | a) Show the differences between simple stomach and compound stomach. | 2.0 |
| | b) Briefly describe about diaphragm of an ox. | 5.0 |

Chittagong Veterinary and Animal Sciences University
DVM 1st Year 1st Semester Final Examination/2013
Course Title: Biostatistics-I (Theory)
Course Code: BST-101(T)
Full Marks: 55, Time: 3 Hours

(Figures in the right margin indicate full marks. Answer any three questions from each section. Question No.5 is compulsory. Use separate answer script for each section.)

Section-A

1. a. What is Biostatistics? What are the consequences of Biostatistics in Veterinary science? 3
 b. Define variable. Discuss different types of variables. 2
 c. Briefly discuss the important steps for constructing a frequency distribution table. 4
2. a. What are the important measures of dispersion? 2
 b. Find the mean and variance of first n natural numbers. 4
 c. The salary structure of the workers of two large sizes commercial dairy farms are as follows:

	<u>Farm A</u>	<u>Farm B</u>
Average salary:	Tk. 5600	Tk. 6000
Standard deviation:	Tk. 100	Tk. 150

A person got job in both the farms. Which farm will join? 3

3. a. Define a random variable, mean and variance of a random variable. 3
 b. Distinguish between probability mass function and probability density function. 2
 c. A discrete random variable has the following probability function:

Values of X (x) :	-3	-2	-1	0	1	2	3
P(x)	a	2a	3a	4a	5a	6a	7a

Find the value of a. Also find mean and variance of x. 4

4. a. What is binomial distribution? Write down the properties of binomial distribution. 3
 b. Under what conditions binomial distribution tends to Poisson distribution and normal distribution? 2
 c. The probability that a patient recovers from a rare blood disease is 0.4. If 5 people are known have contracted this disease. what is the probability that- 4
 i. Exactly 3 survive, ii. At least 2 survive, iii. At most 2 survive, iv. None survive

Section-B

5. a. What are the desirable properties of good measures of central tendency? Which measure of central tendency is the best and why? 4
 b. Define kurtosis. Discuss the different types of Kurtosis. 2
 c. State the desirable properties of good measures of dispersion. Which one is the important absolute measures of dispersion and why? 4
6. a. What do you mean by probability? Prove that probability values always lies between 0 and 1. 3
 b. Define joint probability function and marginal probability function. What is the probability of being low T_4/T_8 ratio and seronegative: what is the probability that a man seronegative from the given table below: 3

Seronegative or positive status	No of men		
	low T_4/T_8 ratio	Normal T_4/T_8 ratio	Total
Seronegative	4	27	31
Seropositive	16	3	19
Total	20	30	50

7. c. Define independent events with example. Show serum status of seronegative and low T_4/T_8 ratio is not independent from the above table. 3
7. a. Define Poisson distribution. Show that mean and variance of Poisson distribution are equal. Cite three applications of Poisson distribution. 5
 b. Suppose, $P[A] = 0.8$, $P[B] = 0.9$ and $P[AB] = 0.72$. Are the A and B independent? 4
8. a. What are the important sources of data collection? Distinguish between primary and secondary data. Cite important sources of secondary data. 5
 b. Classify data according to variable and time. Discuss them with example. 4

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

Section-A

1. Use the right form of verbs in the following sentences: 5
 - a. It was warm, so I (take) off my coat
 - b. The film wasn't very good. I (not enjoy) it.
 - c. The bed was very comfortable. I (sleep) very well.
 - d. We went to Kate's house but she (be not) at home.
 - e. It was a hard work carrying the bags. They (be not) very heavy.

2. Complete the following sentences: 5
 - a. It is many years since I ---
 - b. She walks as if ---
 - c. It is time that the Government ---
 - d. He opened a bank account so that ---
 - e. The game was cancelled owing to ---

3. Transform the following sentences as directed: 5
 - a. He was too young to handle the situation. (Complex)
 - b. Though they are qualified, they did not get the job. (Simple)
 - c. We are not sent to this world simply to make money. (Interrogative)
 - d. How beautiful is the night. (Assertive)
 - e. We play chess in our club. (Passive)

4. Correct the following sentences (if necessary): 5
 - a. My brother including all his friends are going to attend the party.
 - b. Neither the people nor the president is above law.
 - c. You have better studied law than medicine
 - d. The players in the field is English
 - e. It is I who am to be blamed for this.

5. Write a letter to the editor of a newspaper expressing your concern about the impacts of so many strikes on the economic development of your country. 10

6. Translate the following passage into English: 5

ধূমপান অত্যন্ত ক্ষতিকর। এটি ব্যয়বহুলও। এটি পরিবেশকে দূষিত করে। যারা ধূমপান করে তারা বেশি দিন বেঁচে থাকতে পারে না। ধূমপান করলে ক্যান্সার, হৃদরোগ ও শ্বাসযন্ত্রের রোগ হয়। তাই সবার ধূমপান বর্জন করা উচিত।

Section-B

7. Change the following words as directed and make a sentence with the changed word: 5
 - a) respect (adjective) b) mean (noun) c) peace (adverb) d) large (verb) e) move (adjective)

8. Turn the following into indirect speech: 5

"Follow my example," she said as we shook hand, "and never eat more than one thing for luncheon." "I'll do better than that," I retorted. "I'll eat nothing for dinner tonight." "Humourist!" she cried gaily and jumped into a cab.

9. Join the following pairs of sentences as directed: 5
 - a. He won the race. He was the swiftest. (since)
 - b. He is short tempered. I like him all the same. (though)
 - c. I am working hard. My intention is to succeed in life. (so that)
 - d. The girl cried in the class. It seemed she was a little child. (as if)
 - e. A patient is weak. You are also weak like a patient.(as...as)

10. Write a paragraph on any one of the following: 10
 - a) How to fry an egg b) The thing you like about your city

Chittagong Veterinary and Animal Sciences University

DVM 1st Year 1st Semester Final Examination 2011

Subject Title: Biostatistics-I (Theory)

Course Code: BST-101

Full Marks -55; Time: 3.0 Hours

(Figures in the right margin indicate full marks. Answer any **THREE** questions from each section. Use separate answer script for each section. Question 1 is compulsory)

SECTION-A

1. a) Define population, experimental unit, variable and sample with example one for each. 3
 b) What are the important measurements of scale? 1
 c) Identify the experimental unit, variable, types of variables and other measurement of scales of the following: 6
 - i. Breeds of chickens
 - ii. Size of a cow
 - iii. Age of a dog
 - iv. Body temperature of a goat

2. a) What are the important measures of location? Define mode and median. 3
 b) Show that, for two non-zero positive observation values, $A.M \geq G.M \geq H.M$ 4
 Where, A.M = Harmonic Mean, G.M = Geometric Mean, H.M = Harmonic Mean
 When they are equal? \rightarrow Arithmetic
 c) Define co-efficient of variation. Why does coefficient of variation sometimes better than standard deviation? 2

3. a) Define sample space, event, simple event and ^{und}compound event with example. 4
 b) What are the different approaches of defining probability? 2
 c) Suppose, $P[A]=0.8$, $P[B]=0.9$, $P[AB]=0.75$.
 Compute- i) $P[\bar{B}]$, ii) $P[\bar{A}B]$, iii. ~~$P[B\bar{A}]$~~ and iv. $P[A|B]$. Are A and B independent? 3

4. a) Define normal distribution. What is a standard normal variate? Write down the form of standard normal variate and show the position of the mean, median and mode of the distribution. 3
 b) Suppose the weights of chickens of a poultry farm follows normal distribution with mean weight 2.5 kg and standard deviation 0.5 kg. A chicken is selected at random from this farm. What is the probability that its weight is
 - i. more than 2.75 kg
 - ii. less than 2.5 kg
 - iii. between 2.6 kg to 2.75 kg 3
 c) State some important properties of normal distribution. 3

SECTION-B

5. a) What do you mean by dispersion? Briefly discuss the absolute measures of dispersion. 4
 b) Prove that, standard deviation is the least possible root mean square deviation. 3
 c) Suppose that, the weight of chickens at the age of 20 days has mean weight 2 kg with standard deviation 0.9 kg and mode 2.3 kg. Find the skew ness of the weight and comment. 2

6. a) Define random variable. What is the mathematical expectation and variance of a random variable? 4
 b) The following probability function of the birthday cakes per day demanded by the customers is as follows:

Number of Cakes demanded (X)	3	4	5	6	7	8
P(X)	0.08	0.22	0.35	0.20	0.10	0.03

Find the expected number of birthday cakes demanded per day by the customers. Also find the standard deviation of the birthday cakes per day. 3+2= 5

7. a) Define Poisson distribution. How will you derive Poisson distribution from binomial distribution? 3
 b) Prove that, mean and variance of a Poisson distribution are equal. 4
 c) Write the chief characteristics of normal distribution and normal probability curve. 2

8. a) Write short notes(any three) 3x3= 9
 - i. Raw moment and corrected moment
 - ii. Skewness and Kurtosis
 - iii. Bar-diagram and Histogram
 - iv. Correlation co-efficient and Co-efficient of determination