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**Chittagong Veterinary and Animal Sciences University**  
**DVM 1<sup>st</sup> Year 2<sup>nd</sup> Semester Final Examination, 2013**  
**Course Title: Histology and Embryology-II (Theory)**  
**Course Code: VHE-102**  
**Full Marks: 70, Time: 3 Hours**

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

**Section-A**

1. a) Briefly describe the histology of cerebellum. 4  
b) How juxta-glomerular apparatus is formed? Draw and label it. 3
2. a) Describe the histology of epidermis and dermis with diagram. 6  
b) Mention the segments of renal tubule. 1
3. a) Differentiate small intestine from large intestine on histologically. 4  
b) Describe the histological picture of pancreas. 3
4. a) Describe the histology of hepatic lobule. 4  
b) Narrate the histological differences among the major salivary glands of cow. 3
5. a) Draw and label a cross section of a seminiferous tubule. 3  
b) Briefly describe the spermiogenesis process. 4
6. a) List the accessory genital glands of a bull. Describe the histology of seminal vesicle. 4  
b) Briefly describe the histology of urinary bladder of a cow. 3

**Section-B**

7. a) Describe the histology of true stomach. 5  
b) Give the histology of sweat gland. 2
8. a) Give the histology of pars-distalis of pituitary of a bull. 5  
b) Describe the histology of pancreath cell. 2
9. a) Give the histology of trachea. 4  
b) List the histological layers found in retina. 3
10. a) Classify capillary with example(s). 2  
b) Describe the histology of cornea. 5
11. a) Draw and label the follicles found in ovary of a cow. 6  
b) What do you mean by corpus albicans? 1
12. a) Classify placenta found in different mammals. 4  
b) Briefly describe the formation of germ layers in fetus. 3

**Chittagong Veterinary and Animal Sciences University**  
**DVM 1<sup>st</sup> Year 2<sup>nd</sup> Semester Final Examination, 2013**  
**Course Title: Fodder Production (Theory)**  
**Course Code: FPR-102**  
**Full Marks: 70, Time: 3 Hours**

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Figures in the right margin indicate full marks. Answer any 3 (three) questions from each section where question Nos. 1 and 5 are compulsory. Use separate answer script for each section.

### Section-A

- |    |                                                                                                  |   |
|----|--------------------------------------------------------------------------------------------------|---|
| 1. | a) What do you mean by the terms Crop, Fodder crop, and Forage?                                  | 3 |
|    | b) Give the classification of fodder crops that are usually practiced for feeding the livestock. | 3 |
|    | c) How could you manage a pasture for feeding animal round the year?                             | 5 |
| 2. | a) Differentiate between weather and climate.                                                    | 3 |
|    | b) "Climate affects on livestock/fodder production"- justify the statement.                      | 6 |
|    | c) What types of fodder are suitable for cultivation in Chittagong area?                         | 3 |
| 3. | a) What do you mean by preservation and conservation of fodder?                                  | 2 |
|    | b) How could you preserve the produced fodder for feeding the animals in scarce?                 | 6 |
|    | c) What are the differences between good and poor quality fermented roughage feed?               | 4 |
| 4. | a) What is FYM, green manure & compost?                                                          | 3 |
|    | b) "FYM is superior to fertilizer"- justify your opinion.                                        | 5 |
|    | c) How could you manage the water properly for maize and german grass production round the year? | 4 |

### Section-B

- |    |                                                                                    |            |
|----|------------------------------------------------------------------------------------|------------|
| 5. | a) Give the classification of soil. What are the basic components of soil?         | 3          |
|    | b) Discuss the effect of acidity on soil.                                          | 4          |
|    | c) What is acidic soil? Discuss the causes of soil acidity.                        | 4          |
| 6. | a) What is weed? Write down the beneficial effect of weed.                         | 3          |
|    | b) Classify weed with example.                                                     | 4          |
|    | c) How weed can be controlled? Discuss.                                            | 5          |
| 7. | a) How fodder has been introduced to our country.                                  | 3          |
|    | b) What is pasture? Discuss different types of grazing system.                     | 4          |
|    | c) Briefly describe the problems and prospects of fodder production in Bangladesh. | 5          |
| 8. | Write short notes (any three)                                                      | 3 x 4 = 12 |
|    | a) Geo-climatic zones of Bangladesh                                                |            |
|    | b) Intercultural operation                                                         |            |
|    | c) Napier cultivation                                                              |            |
|    | d) Nutritive value of forage                                                       |            |
|    | e) Silage, hay, and haylage                                                        |            |

**Chittagong Veterinary and Animal Sciences University**  
**DVM 1st Year 2<sup>nd</sup> Semester Final Examination-2013**  
**Course Title: Biostatistics (Theory)**  
**Course Code: BST-102(T)**  
**Full Marks: 55, Time: 3 Hours**

(Figures in the right margin indicate full marks. Answer any three (3) questions from each section. Question 1 is compulsory. Use separate answer scripts for each section.)

**SECTION-A.**

1. a. Define Correlation coefficient (r). Write some properties of correlation coefficient. 4  
 b. The marks of 5 students in Anatomy and Histology are: 6  
     Anatomy: 50    55    60    60    65  
     Histology: 55    65    60    65    50  
 Compute rank correlation coefficient. Write the formula when ranks are equal.
2. a) What is sampling? Write down the properties of sampling. 3  
 b) Distinguish between simple random sampling and stratified random sampling. 3  
 c) Suppose a population consists with three values 4, 8, 12. Draw all possible sample of size 4 with replacement. 3
3. a) Define linear regression with an example. Distinguish between correlation coefficient(r) and regression coefficient (b). 4  
 b) The following data give the weights (in Kg) and ages (in day) of 5 chickens of a poultry farm: 3  
     Weight((in Kg): 1.2    1.3    1.4    1.25    1.5  
     Age(in day) : 25    24    21    30    32  
 Fit a linear regression line of weight (y) on ages (x) of 5 chickens.
4. a) Define treatment, block, experimental unit and yields with an example each. 4  
 b) Compare between CRD and RBD. Illustrate an example in your field where you can apply RBD instead of CRD. 5

**SECTION-B**

5. a) Define hypothesis. Distinguish between Type-1 and Type-2 error. 3  
 b) The following numbers of the human M-N Blood group were recorded in a sample of American peoples: 6  
     MM            MN            NN  
     Observed:    277          54          7  
     Expected:    273.4        61.2        3.4  
 Calculate the  $\chi^2$  value from the above data. If the  $\chi^2 = 5.99$  (p=0.05) then give your comments.
6. a) Define point of interval estimation with example. 2  
 b) 20 cows were fed each ration. Error the first group 2 cows were culled because of illness. Which ration causes cows to produce more milk in lactation? 5  

	Ration A	Ration B
Mean	5.4	6.7
Variance	0.201	0.369
Size	18	20
- c) Define power of a test. 2
7. a) Distinguish between parametric and non parametric test. 3  
 b) Write down the advantages and disadvantages of using non-parametric test. 3  
 c) Write short note on nominal scale and interval scale. 3
8. Write short notes on any 3 (three) of the followings: 3x3= 9  
     i) Principles of design of experiment  
     ii) Estimate, estimator and estimation  
     iii) Latin square design  
     iv) Critical and acceptance region

Chittagong Veterinary and Animal Sciences University  
DVM 1st Year 2nd Semester Final Examination, 2013

Course Title: Biostatistics II (Theory)

Course Code: BST-102

Full Marks: 55, Time: 3 Hours

(Figures in the right margins indicate full marks. Answer three questions from each section of which Q 5 is compulsory. Use separate answer script for each section.)

SECTION- A

1. a) Define correlation coefficient. State some of its important properties. 2  
b) Show that correlation co-efficient is independent of the shift of origin and change of scale. 3  
c) A sample of 8 fathers and their elder sons gave the following data about their height in inches:  
Father : 65 63 67 64 68 62 70 66  
Son : 68 66 68 65 69 66 68 65  
Calculate correlation co-efficient and interpret your result. 4
2. a) Define linear regression with an example. What do you mean by coefficient of determination? 4  
b) The following data give the weights (in Kg) and ages (in day) of 5 chickens of a certain poultry farm:  
Weights (in kg) : 0.15 0.5 0.75 1.0 1.25  
Ages (in day) : 10 12 14 20 22  
Fit a regression line of weight (y) on ages(x) of 5 chicken and interpret your result. 5
3. a) Define statistical hypothesis, Type -1 error, size of a test and power of a test. 4  
b) The owner of a poultry farm claims that 85 % chickens are survived if they are attacked by Gumboro disease. 40 chickens of that farm were attacked by this disease and only 35 survived. Test the claim of the owner that farm at 5% level of significance and make your comments. 5
4. a) Define treatment, block, experimental unit and yield with an example. 4  
b) Distinguish between CRD and RBD. Set an example in the veterinary field where we can apply RBD instead of CRD? 3  
c) In what circumstances RBD will turn into CRD? 2

SECTION-B

5. a) What is spearman rank correlation co-efficient? When we can use it? 4  
b) The following data refer to the marks obtained by 5 students of DVM 1<sup>st</sup> year 2nd semester in Histology and Anatomy:  
Histology : 20 30 28 20 15  
Anatomy : 30 20 17 26 22  
Compute rank correlation coefficient and comment. 6
6. a) What is sampling? Write down the names of the important probability and non-probability sampling methods. 3  
b) Suppose a population consists with three values 2, 4, 6. Draw all possible sample of size 2 with replacement. Show that the mean of the sample mean is equal to the population mean. 6
7. a) Distinguish between the correlation and contingency table. 2  
b) Define chi-square test with some of its uses. 3  
c) A tobacco company claims that there is no relationship between smoking and lung cancer of the dairy farm owners. To investigate the claim a random sample of 200 male farm owners of age group 40-50 are given medical test. The observed result is shown as:  
Found Lung Cancer                      Not found Lung Cancer  
Smokers                                      75                                      55  
Non-smokers                                25                                      45  
On the basis of the above information can it be concluded that smoking and lung cancer are independent? 4
8. Write short notes on any three of the followings- 3X3 9  
i. Latin Square Design  
ii. Estimate, Estimator and Estimation  
iii. Multiple and partial correlation  
iv. Critical and acceptance region.

**Chittagong Veterinary and Animal Sciences University**  
**DVM 1<sup>st</sup> Year 2<sup>nd</sup> Semester Final Examination, 2013**  
**Course Title: Animal Hygiene (Theory)**  
**Course Code: - AHY-102**  
**Full Marks: 55, Time: 3 Hours**

Figures in the right margin indicate full marks. Answer any 3 (three) questions from each section where question number 1 is compulsory. Use separate answer script for each section.

**Section-A**

1. a) What is soil? Classify it. 3  
b) Write down the influence of soil on health. 3  
c) Describe the steps that should be followed for the sanitary improvement of soil in a farm. 4
2. a) Define antiseptic and disinfectant with example. 2  
b) Write down the characteristics of an ideal disinfectant. 2  
c) Define fumigation. How will you fumigate a brooder house? 5
3. a) Define water borne and soil borne disease with examples and causal agents. 4  
b) Write down the composition of fresh air. 2  
c) What is acid rain? How can you prevent acid raining? 3
4. a) Describe the methods of animal transportation. 2  
b) What types of measures should you take during animal transportation? 2  
c) Define animal welfare. How arsenic problem has emerged in Bangladesh? 5

**Section-B**

5. a) Give physical properties and function of water. 3  
b) What is hardness of water? How does water become self purified? 3  
c) Write in brief about bacterial spore. 3
6. a) Define radiation hazard. Enumerate the source of radiation. How to minimize the risk of radiation hazard? 4  
b) Classify ventilation. Illustrate the most common type of ventilation practices in our country. 5
7. a) Write down the ecological impact of acid rain. What are the measures should be taken to prevent acid rain? 3  
b) Define sanitation. Give a brief description of cesspool and septic tank. 3  
c) Illustrate the nitrogen cycle. 3
8. a) Write short notes on any 3 (three) of the following 3X3=  
i) Spring and well 9  
ii) Impurities of air  
iii) Isolation and quarantine  
iv) Storage of solid and liquid manure

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**Chittagong Veterinary and Animal Sciences University**  
**DVM 1<sup>st</sup> Year 2<sup>nd</sup> Semester Final Examination, 2013**  
**Course Title: Animal Science and Livestock Management-II (Theory)**  
**Course Code: ASM-102**  
**Full Marks: 70, Time: 3 Hours**

Figures in the right margin indicate full marks. Answer any 3 (three) questions from each section where question Nos. 1 and 5 are compulsory. Use separate answer script for each section.

### Section-A

- |    |                                                                                                          |   |
|----|----------------------------------------------------------------------------------------------------------|---|
| 1. | a) Define feed, forage, and concentrate feed.                                                            | 3 |
|    | b) State the concepts of livestock and livestock management.                                             | 4 |
|    | c) What are the common products and by-products of animal species available in the market?               | 4 |
| 2. | a) How do you like to classify animal feeds?                                                             | 3 |
|    | b) State the use of common animal by-products for the development of industries in Bangladesh?           | 4 |
|    | c) Name 5 (five) protein rich animal feeds from both plant and animal origin with their nutritive value. | 5 |
| 3. | a) Give the recent livestock population statistics of Bangladesh.                                        | 3 |
|    | b) Briefly discuss about 4 (four) important breeds of dog.                                               | 4 |
|    | c) Discuss the prospects of horse and dog in the national economy of Bangladesh.                         | 5 |
| 4. | a) Enumerate the contribution of livestock in human civilization.                                        | 3 |
|    | b) Briefly discuss the prospects of swine industry in Bangladesh.                                        | 4 |
|    | c) State the concepts of calf management.                                                                | 5 |

### Section-B

- |    |                                                                                                                                                                                                                                |   |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 5. | a) Define management, fodder, and metabolizable energy.                                                                                                                                                                        | 3 |
|    | b) Show the schematic diagram illustrating the biological partitioning of energy in animal body.                                                                                                                               | 4 |
|    | c) Why moisture, vitamin and minerals have been ignored from the equation of TDN?                                                                                                                                              | 4 |
| 6. | a) Differentiate feed additive from feed supplements.                                                                                                                                                                          | 4 |
|    | b) Write down the chemical composition of the following feed ingredients:<br>i) Roadside grass, ii) Broken maize, iii) Rice straw, iv) Rice polish, v) Molasses, vi) Soybean meal, vii) Mustard oil cake, and viii) Limestone. | 8 |
| 7. | a) Define housing. Discuss the criteria of selecting site of a commercial dairy farm.                                                                                                                                          | 4 |
|    | b) Draw and label a double row face-out system stanchion barn indicating space allocation.                                                                                                                                     | 4 |
|    | c) Compare loose housing system with stanchion barn.                                                                                                                                                                           | 4 |
| 8. | a) What sort of care and management practices should you adopt for an advanced pregnant cow?                                                                                                                                   | 4 |
|    | a) Classify horse breeds and discuss 2 (two) important breeds of horse.                                                                                                                                                        | 4 |
|    | b) Discuss the food value of egg.                                                                                                                                                                                              | 4 |