Chattogram Veterinary and Animal Sciences University

DVM 1st year 2nd Semester Final Examination 2020

Subject: Gross Anatomy-II (Theory)

Course Title: GRA-102 (T)

Full Marks: 70; Time: 3 Hours

(Figures in the right margin indicate full marks. Answer **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)	Enlist five superficial lymph node of sheep.	1
	b)	Describe the anatomy of spleen of cattle.	3
	c)	Write brief anatomy of pancreas of cattle.	3
2.	a)	Write down the lobes of cerebral hemisphere of brain.	1
	b)	Describe the courses and distribution of vagus nerve of goat.	5
	c)	Write down the formation and position of brachial plexus of goat.	1
3.	a)	Enlist different types of valves in the heart with their locations.	2
	b)	Differentiate anatomically between right and left ventricle.	1
	c)	What are the branches of brachiocephalic trunk?	4
4.	a)	Briefly describe the anatomy of bony labyrinth of internal ear.	4
	b)	Describe different ossicles of middle ear with diagram.	3
5.		Write down the anatomical location and their associated hormones of endocrine glands of cattle.	7
6.	a)	Mention the starting point and termination of vas deferens of bull.	2
	b)	Write down the major branches of abdominal artery of sheep.	2
	c)	Enlist the organs of male genital system and accessory sex glands of bull.	3

SECTION-B

7.	a)	Draw and label female genitalia of cow.	3
	b)	Mention the anatomical location of different organs of female genital system of cow.	3
	c)	Mention chronologically the ducts involved in milk let-down of cow.	1
8.	a)	Enlist the nerves of lumbar plexus of goat.	1
	b)	Mention the cranial nerves which transmit preganglionic parasympathetic efferent fibres. Write down the peripheral ganglia in this part of autonomic nervous system.	3
	c)	Which cranial nerves innervate to the eye and tongue of cow?	3
9.	a)	Which arteries supply to the heart, liver, diaphragm, kidney and small intestine?	2
	b)	Write down the branches of thoracic aorta.	1
	c)	Describe the branches and supply of internal iliac artery of cow.	4
10.	a)	Write a short note about the anatomy of the pituitary gland.	3
	b)	Mention the structures that form the root of heart of ox.	3
	c)	Write down the blood supply of mammary gland of cow.	1
11.	a)	Briefly describe the anatomy of the testis of a bull.	4
	b)	Describe the nervous coat of the eye ball.	3
12.		Write short note on any of the two of the followings.	3.5×2=7
	a)	Hoof of horse	
	b)	Portal circulation	
	c)	CSF and ventricle of brain	

Chattogram Veterinary and Animal Sciences University

DVM 1st year 2nd Semester Final Examination 2020

Subject: Histology and Embryology-II (Theory)

Course Title: HEM-102 (T)

Full Marks: 70; Time: 3 Hours

(Figures in the right margin indicate full marks. Answer **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)	Explain histological structure of cerebellum with diagram.	4
	b)	Draw and label the cross section of a spinal cord and illustrate its histology.	3
2.	a)	Explain histological structure of a blood vessel with diagram.	3
	b)	Compare between artery and vein with diagram.	2
	c)	Discriminate between sinusoid and capillaries.	2
3.	a)	Explain histology of epididymis of skin with diagram.	4
	b)	Illustrate histology of dermis with diagram.	2
	c)	What is the role of arrector pili muscle in dermis region?	1
4.	a)	What are the accessory reproductive glands of bull?	2
	b)	Explain the histology of penis. Draw and label cross section of penis.	3
	c)	Illustrate histology of seminal vesicle.	2
5.	a)	Explain the histological section of hepatic lobule.	4
	b)	What are the different zones of hepatic acinus based on O_2 nutrient gradient?	3
6.	a)	Define placenta.	1
	b)	Classify placenta with example.	2
	c)	Explain histology of different types of follicles found in ovary.	4

SECTION-B

7.	a)	Briefly describe the histology of the parotid salivary gland.	2
	b)	List the histological features of the small intestine. Draw and label the histology of the duodenum.	5
8.	a)	Briefly describe the histology of the different segments of a typical nephron.	5
	b)	Draw and label the histology of the urinary bladder.	2
9.	a)	Draw and label the histology of spleen.	5
	b)	Draw and label the histology of vein and capillary.	2
10.	a)	How will you differentiate bronchus from bronchiole under light microscope?	4
	b)	Briefly describe the histology of the blood air barrier.	3
11.	a)	Draw and label the histological structures of the skin.	4
	b)	Briefly describe the histology of the uterus.	3
12.	a)	Briefly describe the histology of the thyroid gland.	4
	b)	Briefly describe the histology of the anterior pituitary gland.	3

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DVM 1st year 2nd Semester Final Examination 2020

Subject: System Physiology (Theory)

Course Title: SPH-102 (T)

Full Marks: 70; Time: 3 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) Name the mechanical factors of food digestion. Enlist important prehensile organs of cow, goat and cat. 4
   b) State the process of rumination in cattle. 3
   c) Briefly describe protein digestion and absorption in a dog. 4

2. a) Define stereotype. Write down the abnormal behaviours of cattle with health risk. 3
   b) Define T-tubule, calcium pump and fatigue. 3
   c) What are the types of muscle contraction? Briefly discuss the contraction of smooth muscle. 3
   d) Define polyuria, oliguria, uraemia and albuminuria. Enlist the substances those are reabsorbed in proximal tubules. 3

3. a) Define vital capacity, tidal volume and pneumothorax. 3
   b) State the carbon dioxide (CO_2) transport in the body with emphasis in chloride shift. 5
   c) Draw and label the different layers of respiratory membranes. 4

4. a) Show the mechanism of water absorption in dog. Differentiate between mal-absorptive and secretory diarrhoea. 3
   b) What are the absorptive sites for VFAs in ruminants and horse? 3
   c) Discuss the mechanism of lipid digestion in simple stomach animals. 3
   d) A 2 day old calf presented to SAQTVH showing clinical signs like subnormal temperature, sunken eyes, wet tail and perineum etc. Give your comments and treatment pattern for this case. 3

SECTION-B

5. a) What is JG apparatus? Show the Renin-Angiotensin-Aldosterone mechanism in a sketch form. 3
   b) Write down the factors that decrease tissue oxygenation and explain the roles of kidney during this condition. 3
   c) How do H^+, K^+, and NH_3 are reabsorbed in renal tubules? 2
   d) Explain the terms: (i) Plasma clearance and (ii) Renal threshold. 3

6. a) Define acid and base. Write down the endogenous sources of acid in cat. 3
   b) Enlist the buffers of plasma and RBC in animal body. How do bicarbonate buffer systems neutralize strong acid (HCl) and strong base (NaOH) in blood? 3
   c) Write down the routes for the elimination of water from the body. How are electrolytes regulated in an animal body? 3
   d) Write down the mechanisms by which kidney maintain acid-base equilibrium. Discuss any one of them. 3

7. a) Explain the physiological responses of dog during the exposure to hot weather. 3
   b) Show the roles of endocrine hormones in temperature regulation. 3
   c) Write down the ways of heat loss and heat gain in an animal body. 3
   d) Briefly discuss the frostbite and critical temperature. 3

8. a) What are the acoustical or vocalization signals in animals? Write down the importance of communicating and social behaviour in animals. 3
   b) Define ethogram. What are the behavioural indicators of good welfare? 3
   c) Write down the growth and physiological adaptation of camel in the desert. 3
   d) Define homeotherm, poikilotherm and critical temperature. 3

Chattogram Veterinary and Animal Sciences University

DVM 1st year 2nd Semester Final Examination 2020

Subject: Fodder Production (Theory)

Course Title: FPR-102 (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 is** 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 feed, fodder and forage?	1.0
	b)	Briefly discuss about the composition and nutritive value of forage and fodder.	4.0
2.	a)	What is silage? How will you make silage from maize for cattle feeding?	2.0
	b)	Explicate the biochemical changes of grasses occur during ensiling.	4.0
3.	a)	What do you mean by pasture? Write the objectives of pasture management in cattle farming.	3.0
	b)	Explain different types of grazing system with their advantages and disadvantages.	3.0
4.	a)	Define soil. Indicate the causes of increasing soil acidity.	1.0
	b)	Mention the name of different soil tract of Bangladesh and discuss the characteristics of two soil tracts which are suitable for fodder production.	3.0
	c)	Indicate the merits of lime application in soil and importance of soil reaction on plant growth.	2.0

SECTION-B

5.	a)	Define manure and compost. State the nutritional composition of cowdung and poultry droppings.	2.0
	b)	Define weed. Discuss in brief about the mechanical methods of weed control.	4.0
6.	a)	Write down the nutritive value and yield of Cowpea, Guinea,Oat and German fodder.	2.0
	b)	Mention the seed rate, time and method of sowing, fertilizer doses of Para, Lemon grass, Soybean and Jumboo fodder.	4.0
7.	a)	List four annual legume fodders with their scientific names.	2.0
	b)	Discuss briefly the cultivation procedure of Napier, Maize and Berseem fodder.	4.0
8.		Write short notes on the following (any three)	3x2=6
	a)	Ipil-ipil fodder cultivation.	
	b)	Problematic soil of Bangladesh.	
	c)	Surface irrigation.	
	d)	Prospect of fodder production in Bangladesh.	

Chattogram Veterinary and Animal Sciences University

DVM 1st year 2nd Semester Final Examination 2020

Subject: Avian Anatomy (Theory)

Course Title: AVA-102 (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. **5** is compulsory. Use separate answer script for each section. Fractions of the questions must be answered together)

SECTION-A

1. a) Enlist the air sacs of bird and briefly describe the flying mechanism. 3
   b) Briefly describe the anatomy of the avian lungs. 3

2. a) What are the female genital organs of aves. 2
   b) Describe the role of isthmus and magnum for the egg formation. 4

3. Write short notes on (any three) 2x3=6
   (a) Syrinx of a chicken
   (b) Copulatory apparatus
   (c) Cloaca
   (d) Ovary of hen

4. (a) Name the joints of the wing and leg of poultry. 3
   (b) Write down the structures of synovial joint of a bird with diagram. 3

SECTION-B

5. a) Define tumescence. intromission, and Meckel's diverticulum. 3
   b) Briefly describe the testes of aves. 2

6. a) Briefly describe the anatomy of thymus and Bursa of Fabricius of a bird. 3
   b) Write down the anatomy of spleen and caecal tonsil of a chicken. 3

7. Differentiate the followings: 3x2=6
   (i) Mammalian and avian respiratory system.
   (ii) Mammalian and avian digestive system.
   (iii) Mammalian and avian male genital system.

8. a) Briefly describe the anatomy of avian kidney. 3
   b) List the anatomical differences of the kidney among hen, duck and pigeon. 3

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SECTION-A

1.	a)	Enlist five superficial lymph node of sheep.	1
	b)	Describe the anatomy of spleen of cattle.	3
	c)	Write brief anatomy of pancreas of cattle.	3
2.	a)	Write down the lobes of cerebral hemisphere of brain.	1
	b)	Describe the courses and distribution of vagus nerve of goat.	5
	c)	Write down the formation and position of brachial plexus of goat.	1
3.	a)	Enlist different types of valves in the heart with their locations.	2
	b)	Differentiate anatomically between right and left ventricle.	1
	c)	What are the branches of brachiocephalic trunk?	4
4.	a)	Briefly describe the anatomy of bony labyrinth of internal ear.	4
	b)	Describe different ossicles of middle ear with diagram.	3
5.		Write down the anatomical location and their associated hormones of endocrine glands of cattle.	7
6.	a)	Mention the starting point and termination of vas deferens of bull.	2
	b)	Write down the major branches of abdominal artery of sheep.	2
	c)	Enlist the organs of male genital system and accessory sex glands of bull.	3

SECTION-B

7.	a)	Draw and label female genitalia of cow.	3
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	c)	Mention chronologically the ducts involved in milk let-down of cow.	1
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	c)	CSF and ventricle of brain	