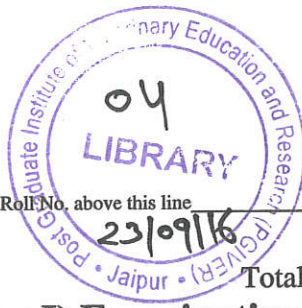


03



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Total Number of pages 19

**B.V.Sc. & A.H. (Part – I) Examination – 2016
of the Five-Year Degree Course**

VETERINARY PHYSIOLOGY PAPER- I

To be filled by the candidate:

Candidate's Roll Number:

In figure

In words

Candidate's Enrolment Number:

Day and date of examination:

Please see for general instructions overleaf.

Signatures of invigilators verifying the details filled by the candidate

Signature of invigilator 1: 2:

Candidate should not write anything below this line

Marks to be filled by the examiner:

Section A		Section B	
Q. No.	Marks	Q. No.	Marks
1.		6.	
2.		7.	
3.		8.	
4.		9.	
5.		10.	
Total		Total	

Total Marks obtained:

In figures: In words:

Signature of examiner:

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80

No
11/10/15

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INSTRUCTIONS TO THE CANDIDATES

1. The invigilator and the members of the Flying Squad are empowered to take search of the examinees during the examinations.
2. Candidate should read the question paper and the instructions carefully before they begin to write answers.
3. The candidate will not be allowed to leave the examination hall before one hour form the end of the examination time.
4. Write on the cover page all the required entries correctly and get the signature of the invigilators.
5. Write legibly in the space provided for answer of each questions/sub-questions according to instruction given in the question paper booklet (question paper).
6. Do not write your name on any part of the question paper / answer booklet.
7. Do not leave examination hall without handing over question paper / answer booklet to the invigilator incharge.
8. No leaves should be torn out of the question paper / answer booklet.
9. Candidate attempting to use unfair means or talking to one another will be dealt with severely as per unfair means rules.
10. No written paper or book notes etc. should be brought to examination hall.
11. Total number of pages of question paper / answer booklet be checked before writing.
12. Candidate should not bring in any article other than pens and admit card. Use of Mobiles, calculators on any other electronic device in the examination hall is strictly prohibited.

SPACE FOR ROUGH WORK

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**B.V.Sc. & A.H. (Part -I) Examination – 2016
of the Five-Year Degree Course**



VETERINARY PHYSIOLOGY PAPER- I

Time: Three Hours

Maximum Marks: 60

Section A: Veterinary Physiology -I: VPB- 111 Marks 30
(Blood, Cardiovascular, Excretory System and Body Fluids)

Section B: Veterinary Physiology-II: VPB 121 Marks 30
(Neuromuscular, Digestive and Respiratory Systems)

Instructions:

- 1) Attempt all questions
- 2) Answer of all questions is to be written in the space provided along with the question in question-booklet.
- 3) Overwriting is not allowed in the objective type question.

SECTION - A

Veterinary Physiology -I: VPB- 111 Maximum Marks 30
(Blood, Cardiovascular, Excretory System and Body Fluids)

Q.1 Fill in the blanks. (9x0.5 = 4.5)

- i) Each gram of Hb combines with a maximum of _____ ml of oxygen.
- ii) Kidney produces _____ protein in regulating erythropoiesis.
- iii) The process by which WBCs leave capillaries is called _____.
- iv) QRS complex shows spreading _____ wave through ventricular muscles.
- v) _____ method is applied for measurement of cardiac output.
- vi) First heart sound is caused by sudden closure of the _____ valves due to sharp rise in ventricular pressure.
- vii) Contraction of the _____ muscle is associated with micturition reflex.
- viii) _____ theory is the most accepted theory for auto-regulation of renal blood flow.
- ix) The pH of extracellular fluid is _____.

Q.2 Choose the most suitable answer and write the number of the correct answer 1 or 2 or 3 or 4 in the space given against each sub question: (9x0.5 = 4.5)

- i) Biosynthesis of hemoglobin starts at the age of: ()
1. Rubriblast
2. Prorubricyte
3. Rubricyte
4. Reticulocyte
- ii) Kuffer cells are active form of: ()
1. Neutrophils
2. Monocytes
3. Lymphocytes
4. Basophils
- iii) Heparin acts as anticoagulant only on combination with: ()
1. Thrombomodulin
2. Prothrombin
3. Antithrombin III
4. Thrombosthenin
- iv) ECG has no separate deflection or wave for _____: ()
1. Atrial contraction
2. Atrial relaxation
3. Ventricular contraction
4. Ventricular relaxation
- v) Resting membrane potential of SA node is: ()
1. - 55 mV
2. -75 mV
3. -90 mV
4. -105 mV
- vi) In determination of blood pressure by direct method, which of the following artery is pricked? ()
1. Brachial artery
2. Pulmonary artery
3. Carotid artery
4. Aorta
- vii) Which of the following is known as low pressure bed? ()
1. Peritubular capillary
2. Renal arterial bed
3. Glomerular capillary bed
4. None of the above
- viii) Avian kidneys have: ()
1. Reptilian type nephron
2. Mammalian type nephron
3. Both types of nephrons
4. Neither type of nephron

Please write Roll No. above this line

- ix) Glomerular filtrate at bowman's capsule is _____ to plasma: ()
1. Isotonic
 2. Hypotonic
 3. Hypertonic
 4. None of the above

Q.3 Attempt any nine out of the following twelve questions. Answer of each question should be in 2 to 3 lines. (9x1= 9)

i) Viscosity of blood:



ii) Buffy coat:

iii) Hematopoiesis:

iv) Methemoglobin:

Please write Roll No. above this line _____

v) Venous return:

vi) Korotkoff sounds:

vii) Pulse:

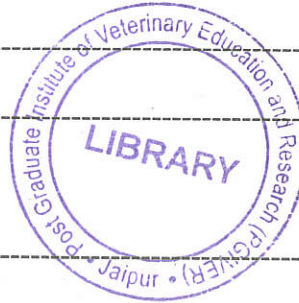
viii) Coronary circulation:

ix) Filtration fraction:

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x) Obligatory urine volume:



xi) Albuminuria:

xii) Interstitial fluid:

Q.4 Attempt any three out of the following four questions. Answer of each question should be in 5 to 8 lines. (3x2 = 6)

i) ESR:

Please write Roll No. above this line

ii) Cardiac sound:

iii) Juxtaglomerular complex:

iv) Cerebrospinal fluid:

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Q.5 Answer the following question in 1-2 pages (attempt any one). (1x6 = 6)

- i) Discuss about the conduction system of heart with suitable diagram.
- ii) Describe the steps of urine formation by kidney.



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SECTION – B

Veterinary Physiology-II: VPB 121

Maximum Marks 30

(Neuromuscular, Digestive and Respiratory Systems)

Q.6 Fill in the blanks.

(9x0.5 = 4.5)

- i) The wave of depolarization and repolarization along the axon is called _____.
- ii) _____ cells of PNS produce myelin sheath around a neuron.
- iii) Each molecule of Troponin-C can bind upto _____ molecules of Ca^{2+} ions.
- iv) _____ is the largest compartment in new born ruminants.
- v) The pH required for optimum activity of pepsin is _____.
- vi) _____ is a glucogenic volatile fatty acid.
- vii) Vocal organ of bird is _____.
- viii) _____ enzyme of RBC catalyses the reaction between CO_2 and H_2O .
- ix) Pulmonary volumes and capacities are recorded by _____ instrument.

Q.7 Choose the most suitable answer and write the number of the correct answer 1 or 2 or 3 or 4 in the space given against each sub question: (9x0.5 = 4.5)

- i) The tigroid appearance of soma of nerve cells is due to the presence of: ()
 1. Golgi bodies
 2. Nissl bodies
 3. Ribosomes
 4. Microsomes
- ii) The part of brain associated with processing of sensory information is: ()
 1. Thalamus
 2. Pons
 3. Medulla
 4. Hypothalamus
- iii) Muscles are surrounded by a sheet of connective tissue are known as: ()
 1. Perimysium
 2. Epimysium
 3. Endomysium
 4. None of the above

Please write Roll No. above this line

- iv) In camel, which part of the stomach is absent? ()
1. Rumen
 2. Reticulum
 3. Omasum
 4. Abomasum
- v) Microbes are able to synthesize which vitamin? ()
1. Vit A
 2. Vit D
 3. Vit E
 4. Vit K
- vi) From which type of cells, pepsin is secreted? ()
1. Oxyntic cells
 2. Neck chief cells
 3. Body chief cells
 4. All of the Above
- vii) How many air sacs are present in birds? ()
1. 7
 2. 8
 3. 9
 4. 10
- viii) Which of the following centre is associated with deep inspiration? ()
1. Dorsal respiratory group
 2. Ventral respiratory group
 3. Pneumotaxic centre
 4. Apneustic centre
- ix) The movement of blood through the pulmonary capillaries is known as: ()
1. Ventilation
 2. Diffusion
 3. Perfusion
 4. None of the above



Q.8 Attempt any nine out of the following twelve questions. Answer of each question should be in 2 to 3 lines. (9x1= 9)

i) Effector neurons:

Please write Roll No. above this line _____

ii) Ganglion:

iii) EPSP:

iv) Sarcomere:

v) Prehension:

vi) Cardia:



Please write Roll No. above this line

vii) Crypts of Lieberkuhn:

viii) Eructation:



ix) Transpulmonary pressure:

x) Tidal volume:

xi) Alveolar dead space:

xii) Hyperpnea:

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Please write Roll No. above this line _____

Q.9 Attempt any three out of the following four questions. Answer of each question should be in 5 to 8 lines. (3x2 = 6)

i) Myopia:

ii) Rigor mortis:

iii) Salivary glands and its secretion:



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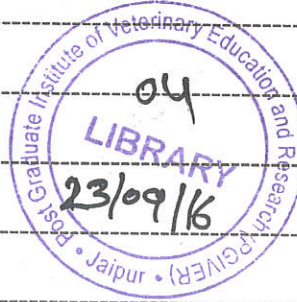
iv) Surfactant:



Q.10 Answer the following question in 1-2 pages (attempt any one). (1x6 = 6)

- i) Write in detail about the "Walk-along" theory of muscle contraction.
- ii) Describe the process of carbohydrate digestion in ruminants.

Please write Roll No. above this line



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