KERALA VETERINARY AND ANIMAL SCIENCES UNIVERSITY
FACULTY OF VETERINARY AND ANIMAL SCIENCES
1st Year B.V.Sc. & A. H. Annual Professional Examination
DECEMBER - 2021
NAME OF THE SUBJECT: VETERINARY ANATOMY (4+3) – PAPER I

Total Time: 3 hours **Total Marks: 100**

(Attempt all the Part-A questions in the question paper itself. Do not write your name or admission number anywhere in the question paper. This question paper has to be attached securely with the main answer book)

PART A - (OBJECTIVE TYPE) **40 MARKS**

I Fill in the blanks **(1.0 x 15 = 15 marks)**

1. Heterotropic bone present in the diaphragm of camel is .....
2. The prominent part on the dorsal surface of tongue in Ox is .....
3. The duct of mandibular salivary gland is called as .....
4. The pericardium is attached to the sternal part of diaphragm by a fibrous band called as .....ligament
5. Brachialis muscle is located in ..... groove of humerus
6. There are ..... pairs of intercostals arteries.
7. The largest paranasal sinus is ..... in Ox
8. The yellow elastic ligament at neck region is called as .....
9. Jugular furrow lodges ..... vein.
10. The muscle of arm that originates from tuber scapula is called as .....
11. A crescent shaped fold of dura mater in the transverse fissure between cerebral hemispheres and cerebellum is .....
12. A triangular neck muscle inserted to tuberous part of scapular spine is .....
13. A band of muscle that covers the parotid salivary gland is .....
14. The ventral primary branches of last 3 cervical and first 2 thoracic spinal nerves unite to form ..... plexus
15. Largest lymphatic vessel in the body is .....

II. Choose the correct answer and write down the alphabet in the bracketed space

(0.5 x 20 = 10 marks)

1. Tooth like process seen in axis is called ( )

a) Odontoid process b) Accessory process
c) Extensor process d) Mammillary process

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2. Supratrochlear foramen is seen in humerus of ( )
a) Ox b) Horse
c) Dog d) Fowl

3. Infundibulum cup in horse is present in ( )
a) Incisors b) Canines
c) Premolars d) Molars

4. Apical bronchus is detached from trachea at the level of ( )
a) 1st rib b) 3rd rib
c) 5th rib d) 10th rib

5. The evagination of Eustachian tube in horse is ( )
a) Laryngeal saccule b) Laryngeal prominence
c) Cavum oris d) Guttural pouch

6. Sella turcica is present in ( )
a) Ethmoid b) Sphenoid
c) Temporal d) Maxilla

7. The nervous tunic of eye ball is ( )
a) Cornea b) Sclera
c) Retina d) Iris

8. The salivary gland present below the base of the ear is ( )
a) Sublingual b) Parotid
c) Submaxillary d) Zygomatic

9. Arterial supply to the heart is through ( )
a) Coronary artery b) Pulmonary artery
c) Carotid artery d) Brachial artery

10) Motor cranial nerve to the eye ball is ( )
a) Olfactory b) Optic
c) Oculomotor d) Trigeminal

11. A shallow cup like articular depression in a bone is called as ( )
a) Fossa b) Fovea
c) Cotyloid cavity d) Glenoid cavity

12. Arbor vitae is the arrangement of white substance in ( )
a) Cerebrum b) Medulla oblongata
c) Cerebellum d) Pons

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13. Which one of the foramen is present in Maxilla bone ( )
a) Supraorbital foramen b) Infraorbital foramen
c) Foramen orbito-rotundum d) Optic foramen

14. Recurrent laryngeal nerve supplies all the muscles of larynx, except ( )
a) Thyro-arytenoideus b) Crico-arytenoideus
c) Arytenoideus transverses d) Crico-thyroideus

15. Petrous part of petrous temporal bone lodges ( )
a) External ear b) Middle ear
c) Internal ear d) All of the above

16. Fused thoracic vertebrae is present in ( )
a) Ox b) Horse
c) Dog d) Fowl

17. The insertion of extensor carpi radialis is ( )
a) Metarcapal tuberosity b) Metatarsal tuberosity
c) 2nd & 3rd Phalanx of lateral digit d) 2nd and 3rd phalanx of medial digit

18. The two divisions of sternocephalicus are ( )
a) Thyrohyoideus & omohyoideus b) Omotransversarius & sternothyroideus
c) Cleido occipitalis & cleido mastoideus d) Sternomandibularis & sternomastoideus

19. The muscle present inside the middle ear is ( )
a) Anconeus b) Parotido auricularis
c) Tensor tympani d) Scutulo auricularis

20. Pecten is present in the eyes of ( )
a) Ox b) Sheep
c) Pig d) Fowl

III. State True of False **(0.5 x 20 = 10 marks)**

1. The foramen magnum is the largest foramen in the skull ( )
2. Anconeous process is present in humerus ( )
3. Longus colli is the longest muscle in the body. ( )
4. Diaphragm is pierced by three foramina ( )
5. Columella is the only auditory ossicle present in fowl ( )
6. Thyroid gland of both sides joined by isthmus in ox ( )
7. Septum pellucidum separates the 3rd and 4th ventricles of brain ( )
8. Cisterna chyli is the largest lymphoid trunk in the body ( )
9. Cartilaginous rings are 'C' shaped in trachea of fowl ( )
10. Terminal part of spinal cord is called cauda equina ( )
11. The cornual process is a part of occipital bone in Ox ( )

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12. The oculomotor nerve supplies all 7 muscles of eyeball ( )

13. Laryngeal saccule is present in equines ( )

14. Retemirabile cerebri is an arterial network around pituitary gland ( )

15. Fissures are deep and reach the hilus of lungs in dog ( )

16. Thoracodorsal artery supplies the lattisimus dorsi muscle ( )

17. The vestigial last molar is called wolf tooth in Horse ( )

18. Semincircular canals in the inner ear are 5 in number ( )

19. All the bones of pelvic girdle form foramen triossium in fowl ( )

20. The bony orbital ring in dog is incomplete ( )

IV. Match the following. **(0.5 x 10 = 5 marks)**

	Column A		Column B
1	Diaphragma sellae	A	Corpora quadrigemina
2	Wish bone	B	External jugular vein
3	False nostrils	C	Ventricle of heart
4	Dental pad	D	Tongue of dog
5	Nates	E	Spur
6	Tarsometatarsus	F	Organ of voice
7	Lyssa	G	Clavicle of fowl
8	Syrinx	H	Ox
9	Vortex cordis	I	Fold of duramater
10	Intravenous injection	J	Horse

PART B - (SUBJECTIVE TYPE) **60 MARKS**

V. Write short notes on ANY EIGHT of the following **(5.0 x 8 = 40 marks)**

1. Classification of joints
2. Cartilages of larynx in Ox
3. Explain the muscles of forearm region
4. Differentiate the mandible of Ox and Horse

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5. Differentiate the left and right atria of heart
6. Describe the Fibrous tunic of eye ball
7. Indications and sites of Nerve blocks of head region
8. List out the cranial nerves with their Type, Origin and Foramen of exit
9. What are pneumatic bones and explain Sternum of fowl
10. Muscles of eye ball

VI. Write an essay on ANY TWO of the following (10.0 x 2 = 20 marks)

1. Enumerate bones and joints of forelimb and describe Scapula of Ox, Horse and Dog
2. Describe the gross anatomy of Lungs in Ox and Horse
3. Explain the branches of Brachial artery and its supply to muscles of forelimb

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KERALA VETERINARY AND ANIMAL SCIENCES UNIVERSITY

FACULTY OF VETERINARY & ANIMAL SCIENCES

FIRST ANNUAL PROFESSIONAL EXAMINATION- AUG-SEPT-2017

VETERINARY ANATOMY - PAPER –I

Total Time: 3 hours **Total Marks-100**

Date: 26-08-2017 **Time: 10 a.m. to 1 p.m.**

Instructions to the candidate

1. **Ensure that this Q. paper contains 6 printed pages**
2. **Attempt all questions of PART-A in the Q. paper itself.**
3. **Since any kind of over writing will not be considered and counted, read the questions well before answering them.**
4. **Do not write your name or admission number anywhere in the Q. paper.**
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PART-A (OBJECTIVE) **MARKS-40**

I. Fill in the blanks **(28 X 0.5 marks=14)**

1. Pulley like articular area is known as----------.
2. Example for visceral bone in dog is----------.
3. The outermost meninges of brain is ----------.
4. Third and fourth ventricles of brain are communicated through----------.
5. In cattle,---------- vein is commonly used for intravenous injection.
6. Retemirabili cerebri is absent in ---------- (domestic animal).
7. Thoracic cavity is lined by---------- membrane.
8. Acromian process is absent in the scapula of ----------(domestic animal).
9. Ulna is an aborted long bone in ---------- (domestic animal).
10. Number of carpals in each fore limb of ox is----------.
11. Example for Hinge joint is ----------.
12. Lattismus dorsi is innervated by ---------- nerve.

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a. Hypochondrium b. Epiphyseal cartilage c. Perichondrium d. Periosteum

6. Palpable bony prominence is ( )

a. Olecranon process b. Acromian process c. Deltoid tuberosity d.Teres tubercle

7. In ox, pulse is taken in ---------- artery ( )

a. External maxillary artery b. Ventral coccygeal artery

c. Femoral artery d.Median artery

8. Extensors of forearm are innervated by ( )

a. Radial nerve b. Ulnar nerve c.Median nerve d. Axillary nerve

9. Radial artery is the terminal branch of ( )

a. Brachial artery b. Median artery c. Ulnar artery d. Collateral radial artery

10. Cephalic vein is the upward continuation of ( )

a. Dorsal meta carpal vein b. Cubital vein c. Brachial vein d. Brachiocephalic vein

11.For ulnar nerve block ---------- can be taken as land mark ( )

a.Ulnar carpal b. Radial carpal c. Accessory carpal d. Olecranon process

12.---------- is the largest paranasal sinus in ox ( )

a. Maxillary sinus b. Frontal sinus c. Palatine sinus d. Sphenoid sinus

13. The ligament which has elastic fibres is ( )

a. Ligametum nuchae b. Suspensory ligament

c. Carpal ligament d. Interosseus ligament

14. Entoglossal process is present in the hyoid of ( )

a. Fowl b. Horse c. Dog d. Pig

15. Lower boundary of jugular furrow is formed by ( )

a. Brachiocephalicus b. Sternocephalicus c. Sternothyrohyoideus d. Omohyoideus

16. Brachiocephalicus is innervated by ( )

a. Spinal accessory nerve b. Lumbar spinal nerves

c. Thoracic spinal nerves d. Recurrent laryngeal nerve

17. Recurrent laryngeal nerve is the branch of ---------- nerve ( )

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a. Vagus b. Trigeminal c. Facial d. Spinal accessory

( )

18. Dental pad is present in

a. Ox b. Horse c. Dog d. Fowl

( )

19. Uvula is present in

a. Dog b. Pig c. Ox d. Horse

( )

20. Columella is present in the ear of

a. Fowl b. Dog c. Horse d. Ox

( )

21. Number of asternal ribs in ox is ----------

a. 4 b. 5 c. 6 d. 3

( )

22. One of the terminal branches of internal thoracic artery is

a. Musculo phrenic artery b. Inferior cervical artery

c. Posterior abdominal artery d. Sub costal artery

( )

23.Costochondral articulation is between

a. Lower end of the rib and costal cartilage b. Lower end of rib and sternum

c. Upper end of rib and thoracic vertebrae d. Between the sternebrae

( )

24. Lungs aresituated in the dorsal aspect of thoracic cavity in

a. Horse b. Ox c. Fowl d. Dog

( )

25. In thoracic vertebrae, capitular facet is present in the

a. Centrum b. Transverse process

c. Dorsal spinous process d. Ventral spinous process

( )

26. Number of thoracic vertebrae in fowl is

a. 13 b. 7 c. 14 d. 6

( )

27. In ox,dorsal aspect of sternum gives origin for the ---------- muscle

a. Transverse thoracis b. Rectus thoracis

c. Rectus abdominis d. Longuss colli

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7.

28. Internal thoracic artery supplies blood to ( )

a. Transverse abdominis b. Rectus abdominis

c. Longus colli d. Transverses thoracis

III. Match column A with column B. Write the numeral in the space provided.

(12 X 0.5 mark = 6)

	A		B
a	Trabeculae carneae		1.Frontal bone
b	Facial tuberosity		2.Dog
c	Teres tubercle		3.Trigeminal nerve
d	Musculi pectinate		4.Corpus callosum
e	Zygomatic gland		5.Pituitary
f	Supra orbital foramen		6.Atrium of heart
g	Parotid gland		7.Maxilla
h	Association fibres		8.Facial nerve
i	Ophthalmic nerve		9.Papilla salivalis
j	Commissural fibres		10.Ventricles of heart
k	Auriculo palpebral nerve		11.Humerus
l	Diaphragm sellae		12. Internal capsule

IV. State true or false for the following statements. **(12 X 0.5 mark = 6)**

1. Metacarpals of ox is known as splint bones ( )
2. Deltoid tuberosity is present in the form of ridge in horse. ( )
3. Supra trochlear foramen is present the humerus of fowl ( )
4. Clavicles are absent in the fowl. ( )
5. Radial and intermediate carpals are fused in dog. ( )
6. Reticulum extend from the level of 6th to 8th rib of the right side of the abdomen in ox ( )
7. Parotid salivary gland is purely serous in ox. ( )
8. Median artery divides into collateral radial and collateral ulnar arteries. ( )

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9. Anterior colliculi are concerned with the sensation of hearing ( )

10. Fossa ovalis in the heart is the remnant of Foramen ovale of foetus ( )

11. Cattles are digitigrade animals ( )

12. Well developed transverse process are seen in the thoracic vertebrae ( )

PART –B (SUBJECTIVE) **60 MARKS**

V. Define the following terminologies in one or two sentences **(5 X 1 mark= 5)**

1. Periosteum 2.Papilla salivalis 3.Ball and socket joint

4. Caudaequina 5.Paracentesis thoracis

VI. Substantiate or give reasons for the following statements in two or three sentences

1. Eye of dog will shine in the night. **(5 X 2 marks = 10)**

2. Ulnaris lateralis differ than other flexors of the forearm in blood and nerve supply.

3. Frontal crest is the important land mark in amputation of horn.

4. Olfactory sense is high in dogs.

5. Oral breathing is not easily possible in horses.

VII. Write short notes (not to exceed 200 words) on any five of the following. (Draw diagrams/ flow chart where ever necessary) **(5 X 5 marks = 25)**

1. Tongue of ox 2. Proximal extremity of humerus- ox

3. Flow chart on terminal branches of carotid artery

4. Laryngeal cartilages of dog

5. Muscles of Eye ball with their blood and nerve supply

6. Brachial plexus

7. Typical vertebra

VIII. Describe in detail (not to exceed 600 words) on any two of the following. (Draw diagrams/ flow chart where ever necessary) **(2 X 10 marks = 20)**

1. Describe the Vagus nerve and its course

2. Describe the regional anatomy of shoulder medial region of ox

3. Enumerate the joints of forelimb in the order and explain the structures of a synovial joint

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1st Year B.V.Sc. & A. H. Compartmental Examination
OCTOBER - 2018
NAME OF THE SUBJECT: VETERINARY ANATOMY PAPER-I
PART A - (OBJECTIVE TYPE)

I Fill in the blanks **(1.0 x 15 = 15 marks)**

1. The cylindrical articular area of the bone is known as_____.
2. The first branch of aorta is_____
3. The sickle shaped fold of duramater is known as _____
4. The part of the ethmoid bone that separates the cranial and nasal cavities is _____
5. The total no. of proximal sesamoids present in each limb of ox is_____
6. In fowl, clavicles of two sides unite ventrally to form a flattened plate like structure is called as _____.
7. The coranoid and olecranon fossa communicate with each other through _____foramen in dog.
8. The shape of the accessory carpal in horse is_____
9. Arciform ligaments are associated with _____ joint.
10. The biceps brachii muscle is supplied by _____ artery.
11. The largest extensor muscle of fore arm is _____
12. The latissimus dorsi muscle is supplied by _____nerve.
13. The longest cervical vertebrae is_____
14. The largest facial bone of ox is _____
15. The facial crest of maxilla is prominent in _____ species.

II. Choose the correct answer and write down the alphabet in the bracketed space
(0.5 x 20 = 10 marks)

1. A small blunt projection of a bone is called as ( )
   a) Trochanter b) Tuberosity c) Tubercle d) Process
2. Bicipital groove is divided by an intermediate ridge in which of the following ( )
   a) Ox b) Horse c) Dog d) Fowl
3. The articulation between roots of teeth in the alveolar sockets is known as ( )
   a) Gomphosis b) Schindylesis c) Syndesmoses d) Symphysis
4. In large animals, commonly used vein for infusion of fluids is ( )
   a) Cephalic vein b) Internal jugular vein
   c) External jugular vein d) Anterior vena cava
5. The shape of the ulnar carpal in fowl is ( )
   a) Irregular b) Quadrilateral c) Forked d) Traingular
6. Which of the following is not a shoulder girdle muscle ( )
   a) Pectoral b) Brachiocephalicus
   c) Omotransversarius d) Biceps brachii

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7. The medial small metacarpals of horse represents ( )
   a) 4th meta carpal b) 3rd meta carpal c) 2nd meta carpal d) 1st meta carpal
8. The single occipital condyle is present in which of the following species ( )
   a) Ox b) Horse c) Dog d) Fowl
9. The motion of the temporo-mandibular articulation is ( )
   a) Adduction b) Abduction
   c) Depression and elevation d) Circumduction
10. The action of triceps muscle on elbow joint is ( )
   b) Adduction b) Abduction
   d) Felxion d) Extension
11. The arterial supply to all the extensors of fore arm is ( )
   a) Radial artery b) Collateral radial artery
   c) Collateral ulnar artery d) Ulnar artery
12. Supra scapular nerve termination in which of the following muscle ( )
   a) Supra spinatus muscle b) Infra spinatus muscle c) Teres minor d) Teres major
13. The common digital extensor muscle inserts on ( )
   a) Metacarpal tuberosity b) 3rd phalanx
   c) 2nd phalanx d) 1st phalanx
14. The musculocutaneous nerve terminates on ( )
   a) Biceps brachii b) Triceps brachii c) Brachialis d) None
15. A point below the medial tuberosity of radius is the site for ( )
   a) Ulnar nerve block b) Median nerve block
   c) Radial nerve block d) None of the above
16. The unpaired cranial bone is ( )
   a) Temporal b) Parietal
   c) Occipital d) Frontal
17. Which of the following is not a masticatory muscle ( )
   a) Masseter b) Buccinator
   c) Digastricus d) Temporalis
18. Foramen transversarium is absent in the following cervical vertebrae ( )
   a) 6th b) 7th c) 5th d) 4th
19. Largest paranasal sinus in ox is ( )
   a) Frontal b) Sphenoidal
   c) Maxillary d) Palatine
20. The hardest bone in the body is ( )
   a) Basioccipital b) Petrous temporal
   c) Basisphenoid d) Squamous temporal

III. State True of False **(0.5 x 20 = 10 marks)**

1. The accessory carpal is not a sesamoid bone in horse ( )
2. Oculomotor nerve arises from pons ( )
3. The pulmonary orifice is guarded by three semilunar cusps ( )
4. All spinal nerves are mixed type ( )
5. The glenoid notch on the anteromedial aspect of glenoid cavity of scapula in ox ( )
6. The ulna is larger and thicker than radius in fowl ( )
7. Uilnaris lateralis muscles arises from medial epicondyle of the humers ( )
8. The third and fourth digits are the longest in dogs ( )
9. Continuation of the brachial artery is ulnar artery ( )
10. The total number of carpal bones in each limb of ox is six ( )

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11. The brachialis muscle lodges in musculospiral groove of humerus ( )
12. In fowl, the scapula is placed vertical to the vertebral column ( )
13. The largest nerve in the brachial plexus is median nerve ( )
14. The capitualr facets are present in 6th cervical vertebrae ( )
15. Hyoid of fowl consists of 7 bony segments ( )
16. The fixed part of the muscle is called as insertion ( )
17. Palatine sinus is the largest paranasal sinus in horse ( )
18. Prescapular lymph node located under omotransversarius muscle ( )
19. Parasympathetic nervous system has cranial and sacral part ( )
20. The orbital rim is incomplete in dog ( )

IV. Match the following. **(0.5 x 10 = 5 marks)**

1. Os magnum	( )	a. Elbow joint
2. Enarthroses	( )	b. Fused 3rd & 4th metacarpal
3. Imperfect hinge joint	( )	c. Dog
4. Quadrate bone	( )	d. Vestigeal
5. Large metacarpal-Ox	( )	e. Radiocarpal joint
6. Pronator teres	( )	f. 3rd phanax
7. Lamina transversalis	( )	g. Dilate the nostrils
8. Os pedis	( )	h. Fused 2nd & 3rd carpal
9. Caninus	( )	i. Ball and socket joint
10. Hinge joint	( )	j. Fowl

PART B - (SUBJECTIVE TYPE) 60 Marks

V. Write short notes on ANY EIGHT of the following **(5.0 x 8 = 40 marks)**

1. Describe the bones of shoulder girdle of fowl
2. Describe different branches of coeliac artery
3. Write the origin, insertion and action of triceps brachii muscle
4. Describe course and distribution of median nerve
5. Describe various collateral branches of brachial artery
6. Write different muscles of eye ball and write its nerve supply
7. Write the boundaries for lateral and third ventricles of brain
8. Write the differences between large metacarpals of ox and horse
9. List out different muscles of shoulder girdle and write origin, insertion and action of latissimus dorsi muscle
10. Write anatomical differences between sympathetic and parasympathetic nervous systems

VI. Write an essay on ANY TWO of the following **(10.0 x 2 = 20 marks)**

1. Write the course and distribution of facial nerve
2. Describe humerus of ox and compare with horse
3. Differentiate between right and left ventricles of heart

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Total Time: 3 hours **TotalMarks: 100**

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PART A - (OBJECTIVE TYPE)40 MARKS

I Fill in the blanks **(1.0 x 15 = 15 marks)**

1.Cervical part of supraspinous ligament is known as _____

2.The nerve which supplies to corium of horn is _____

3.Sulcus linguae is seen _____ species

4.Two divisions of brachiocephalicus muscle are _____ . and _____

5. Visceral bone present in dog is _____

6. The cerebrospinal fluid is present in _____ space of brain

7. In dog, coronoid and olecranon fossa communicates through a foramen called _____

8. Apex of the heart is formed by _____

9. The proximal sesamoidean ligament is otherwise called as _____

10. Shape of accessory carpal in horse is _____

11. The movement permitted by fetlock joint is _____ and _____

12. Lymph node located at the anterior border of supraspinatus muscle is _____

13. Cribriform plate is located in the ..... bone

II. Choose the correct answer **(0.5 x 20 = 10 marks)**

1. The posterior cerebellar peduncle is
   a. Brachium conjunctivum
   b. Brachium pontis
   c. Restiform body
   d. Anterior medullary velum
2. The process situated between the transverse and anterior articular process is
   a. Spinous process
   b. Oblique process
   c. Accessory process
   d. Mammillary process
3. Sellaturcica is part of
   a. Ethmoid
   b. Sphenoid
   c. Parietal
   d. Temporal
4. The fixed part of muscle is
   a. Origin
   b. Insertion
   c. Belly
   d. Tendon
5. Acromion process is absent in the scapula of _____
   a. Ox
   b. Horse
   c. Dog
   d. Fowl

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6. Posterior colliculi is responsible for
   a. Taste
   b. Auditory
   c. Smell
   d. Vision
7. The thoraco-dorsal nerve supplies to
   a. Pectoral muscle
   b. Latissimusdorsi
   c. Deltoideus
   d. Supraspinatus
8. Pulmonary ligament is characteristic feature in lung of
   a. Ox
   b. Fowl
   c. Dog
   d. Horse
9. The structure formed by fusion of 2nd to 5th thoracic vertebra in fowl is
   a. Synsacrum
   b. Uncinate process
   c. Pygostyle
   d. Notarium
10. The cartilage which determines the shape of ear
   a. Conchal
   b. Annular
   c. Scutiform
   d. Hyaline
11. Pigmented vascular structure in eye of fowl is
   a. Pecten
   b. Optic papilla
   c. Limbus
   d. Blind spot
12. The paired cartilage of larynx is
   a. Thyroid
   b. Cricoid
   c. Arytenoid
   d. Epiglottis
13. Motor nerve to muscles of tongue is
   a. Chorda tympani
   b. Trigeminal
   c. Hypoglossal
   d. Facial
14. Number of palatine ridges in horse
   a. 19
   b. 20
   c. 18
   d. 17
15. External thoracic vein is known as
   a. Mammary vein
   b. Spur vein
   c. Brachial Vein
   d. Inguinal vein
16. Plica venacava is formed by
   a. Pericardium
   b. Peritoneum
   c. Ligament
   d. Pleura
17. Medullary cavity is present in
   a. Long bone
   b. Short bone
   c. Sesamoid bone
   d. Irregular bone
18. A strong extensor of elbow joint
   a. Biceps brachii
   b. Coracobrachialis
   c. Triceps brachii
   d. Extensor carpi radialis
19. Suprascapular artery supplies to
   a. Rectus abdominis
   b. Anconeus
   c. Latissimusdorsi
   d. Supraspinatus
20. Extensor process is seen in
   a. 1st Phalanx
   b. Femur
   c. 2nd Phalanx
   d. 3rd Phalanx

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III. State True of False **(0.5 x 20 = 10 marks)**

1. Cheeks are present in fowl
2. Biceps brachii is inserted to condyle of humerus
3. Thyroid glands are located anterior to the kidneys
4. Deep brachial artery is the branch of brachial artery
5. Lingual gyri contains area for vision
6. Coronary artery supplies blood to the heart.
7. Complexus covers the femur
8. Menisci is present in elbow joint
9. Largest foramen in skull is foramen ovale
10. The arrangement of the cerebellum is called as arbor vitae
11. Bone marrow consisted of red and yellow marrow
12. Costal groove is absent in first rib
13. In brain, grey matter is outside and the white matter is inside
14. Suspensory ligament is associated with fetlock joint
15. Radial and intermediate carpals are fused in dog
16. Anisognathus animals have equal upper and lower jaw width
17. Two anterior venacava and single posterior venacava are seen in fowl
18. The nervous tunic of the eyeball consists of retina and optic nerve
19. Foliate papilla is present in tongue of ox
20. Syrinx is the voice box of fowl

IV. Match the following. **(0.5 x 10 = 5 marks)**

	Column A	Answer (write the alphabet of column B here)	Column B
1	SA node		a. Epiphysis cerebri
2	Bulbous aorticus		b. Lymphatic duct
3	Phrenic artery		c. Corpus striatum
4	Thoracic duct		d. Olecranon fossa
5	Anconeus		e. Fornix
6	Pineal body		f. Rete mirabilecerebri
7	Roof of third ventricle		g. Diaphragm
8	Middle meningeal artery		h. Right atrium
9	Common digital extensor		i. Aorta
10	Basal ganglia		j. Extensor process

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PART B - (SUBJECTIVE TYPE) 60 MARKS

V. Write short notes on ANY EIGHT of the following (5.0 x 8 = 40 marks)

1. Flexors of forelimb
2. Duramater of brain
3. Branches of subscapular artery
4. Air sacs of fowl
5. Mandible of ox
6. Coronary artery
7. Scapula of horse
8. Pharyngeal openings
9. Extrinsic muscles of eyeball
10. Auditory ossicles

VI. Write an essay on ANY TWO of the following (10.0 x 2 = 20 marks)

1. Describe about the lungs of ox
2. Write about the right atrium of heart
3. Write in detail about the humerus of ox

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KERALA VETERINARY AND ANIMAL SCIENCES UNIVERSITY
FACULTY OF VETERINARY AND ANIMAL SCIENCES
1st Year B.V.Sc. & A. H. Annual Professional Examination
DECEMBER - 2023
VETERINARY ANATOMY PAPER I

Total Time: 3 hours **TotalMarks: 100**

(Attempt all the Part-A questions in the question paper itself. Do not write your name or admission number anywhere in the question paper. This question paper has to be attached securely with the main answer book)

PART A - (OBJECTIVE TYPE)40 MARKS

I Fill in the blanks **(1.0 x 15 = 15 marks)**

1.Cervical part of supraspinous ligament is known as _____

2.The nerve which supplies to corium of horn is _____

3.Sulcus linguae is seen _____ species

4.Two divisions of brachiocephalicus muscle are _____ and _____

5. Visceral bone present in dog is _____

6. The cerebrospinal fluid is present in _____ space of brain

7. In dog, coronoid and olecranon fossa communicates through a foramen called _____

8. Apex of the heart is formed by _____

9. The proximal sesamoidean ligament is otherwise called as _____

10. Shape of accessory carpal in horse is _____

11. The movement permitted by fetlock joint is _____ and _____

12. Lymph node located at the anterior border of supraspinatus muscle is _____

13. Cribriform plate is located in the ..... bone

II. Choose the correct answer **(0.5 x 20 = 10 marks)**

1. The posterior cerebellar peduncle is
   a. Brachium conjunctivum
   b. Brachium pontis
   c. Restiform body
   d. Anterior medullary velum
2. The process situated between the transverse and anterior articular process is
   a. Spinous process
   b. Oblique process
   c. Accessory process
   d. Mammillary process
3. Sellaturcica is part of
   a. Ethmoid
   b. Sphenoid
   c. Parietal
   d. Temporal
4. The fixed part of muscle is
   a. Origin
   b. Insertion
   c. Belly
   d. Tendon
5. Acromion process is absent in the scapula of _____
   a. Ox
   b. Horse
   c. Dog
   d. Fowl

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6. Posterior colliculi is responsible for
   a. Taste
   b. Auditory
   c. Smell
   d. Vision
7. The thoraco-dorsal nerve supplies to
   a. Pectoral muscle
   b. Latissimusdorsi
   c. Deltoideus
   d. Supraspinatus
8. Pulmonary ligament is characteristic feature in lung of
   a. Ox
   b. Fowl
   c. Dog
   d. Horse
9. The structure formed by fusion of 2nd to 5th thoracic vertebra in fowl is
   a. Synsacrum
   b. Uncinate process
   c. Pygostyle
   d. Notarium
10. The cartilage which determines the shape of ear
   a. Conchal
   b. Annular
   c. Scutiform
   d. Hyaline
11. Pigmented vascular structure in eye of fowl is
   a. Pecten
   b. Optic papilla
   c. Limbus
   d. Blind spot
12. The paired cartilage of larynx is
   a. Thyroid
   b. Cricoid
   c. Arytenoid
   d. Epiglottis
13. Motor nerve to muscles of tongue is
   a. Chorda tympani
   b. Trigeminal
   c. Hypoglossal
   d. Facial
14. Number of palatine ridges in horse
   a. 19
   b. 20
   c. 18
   d. 17
15. External thoracic vein is known as
   a. Mammary vein
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   c. Latissimusdorsi
   d. Supraspinatus
20. Extensor process is seen in
   a. 1st Phalanx
   b. Femur
   c. 2nd Phalanx
   d. 3rd Phalanx

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III. State True of False **(0.5 x 20 = 10 marks)**

1. Cheeks are present in fowl
2. Biceps brachii is inserted to condyle of humerus
3. Thyroid glands are located anterior to the kidneys
4. Deep brachial artery is the branch of brachial artery
5. Lingual gyri contains area for vision
6. Coronary artery supplies blood to the heart.
7. Complexus covers the femur
8. Menisci is present in elbow joint
9. Largest foramen in skull is foramen ovale
10. The arrangement of the cerebellum is called as arbor vitae
11. Bone marrow consisted of red and yellow marrow
12. Costal groove is absent in first rib
13. In brain, grey matter is outside and the white matter is inside
14. Suspensory ligament is associated with fetlock joint
15. Radial and intermediate carpals are fused in dog
16. Anisognathus animals have equal upper and lower jaw width
17. Two anterior venacava and single posterior venacava are seen in fowl
18. The nervous tunic of the eyeball consists of retina and optic nerve
19. Foliate papilla is present in tongue of ox
20. Syrinx is the voice box of fowl

IV. Match the following. **(0.5 x 10 = 5 marks)**

	Column A	Answer (write the alphabet of column B here)	Column B
1	SA node		a. Epiphysis cerebri
2	Bulbous aorticus		b. Lymphatic duct
3	Phrenic artery		c. Corpus striatum
4	Thoracic duct		d. Olecranon fossa
5	Anconeus		e. Fornix
6	Pineal body		f. Rete mirabilecerebri
7	Roof of third ventricle		g. Diaphragm
8	Middle meningeal artery		h. Right atrium
9	Common digital extensor		i. Aorta
10	Basal ganglia		j. Extensor process

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PART B - (SUBJECTIVE TYPE) 60 MARKS

V. Write short notes on ANY EIGHT of the following (5.0 x 8 = 40 marks)

1. Flexors of forelimb
2. Duramater of brain
3. Branches of subscapular artery
4. Air sacs of fowl
5. Mandible of ox
6. Coronary artery
7. Scapula of horse
8. Pharyngeal openings
9. Extrinsic muscles of eyeball
10. Auditory ossicles

VI. Write an essay on ANY TWO of the following (10.0 x 2 = 20 marks)

1. Describe about the lungs of ox
2. Write about the right atrium of heart
3. Write in detail about the humerus of ox

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KERALA VETERINARY AND ANIMAL SCIENCES UNIVERSITY
FACULTY OF VETERINARY AND ANIMAL SCIENCES
1st YEAR B.V.Sc.&A.H. Annual Professional Examination
JULY-AUGUST -2018
VETERINARY ANATOMY- PAPER-I

Total Time: 3 Hours **Total Marks: 100**

PART-A (OBJECTIVE TYPE) 40 Marks

I. Fill in the blanks **(1.0x15=15 Marks)**

1	A depression that leads to two or more foramina is called as----------
2	Tip of the tongue is _____shaped in horse
3	Buccal cavity and pharynx communicate through------
4	Serous membrane lining the thoracic cavity is------
5	Median artery terminates into ---------- and ----------
6	Obturator nerve is a branch of ----------
7	A broad fibrous expansion of a muscle is called as ----------
8	Third and fourth ventricles of the brain communicates through--------
9	The nuclei on the floor of the lateral ventricles are ---------- and ----------
10	The artery used for feeling pulse in the facial region of the ox is ----------
11	The fourth cheek tooth of dog is termed as ------
12	The transparent and avascular part of the eye is ----------
13	Pulley-like articular area is termed as----------
14	The scleral ossicles are present in the eye ball of ----------
15	The largest parasympathetic ganglion is ----------

II. Choose the correct answer **(0.5x20=10 Marks)**

1	Number of pairs of sternal ribs in ox
	a. Six b. Eight c.Five d. Ten
2	Scapular tuberosity is present in
	a.Ox b.Horse C.Dog D.Pig
3	The muscle located in the musculospiral groove of the humerus is
	a.Brachiocephalicus b.Biceps brachii c.Brachialis d.Biceps femoris
4	The olecranon and coronoid fossae communicate through
	a.Supratrochlear foramen b.Foramen triosseum c.Obturator foramen d.Volar foramen
5	Distal extremity of fibula is called as
	a.Medial malleolus b.Lateral malleolus c.Fabella d.Patella

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6	In horse the cow kick is prevented by
	a.Round ligament b.Accessory ligament c.Collateral ligament d.Cruciate ligament
7	The largest venous trunk in the body is
	a.Cephalic vein b.Recurrent tarsal vein c.Anterior vena cava d.Posterior vena cava
8	The ligament that helps the horse to stand for long time is
	a.Check ligament b.Sesamoidian ligament c.Arciform ligament d.Capsular ligament
9	The largest paranasal sinus in ox is
	a.Frontal b.Maxillary c.Palatine d.Sphenoid
10	In ox, the papilla salivalis is located at the level of
	a.Upper 3rd cheek tooth b.Upper 5th cheek tooth c.Lower 3rd cheek tooth d.Lower 5th cheek tooth
11	Optic papilla is otherwise called as
	a.Blind spot b.Macula lutea c.Tapetum fibrosum d.Pars ciliaris retina
12	The site for median neurectomy operation is
	a.Below the elbow on medial aspect b.Below the elbow on lateral aspect c.Above the accessory carpal on lateral aspect d.Above the accessory carpal on posterior
13	Lyssa is a fusiform fibrous cord present in
	a.Oesophagus b.Stomach c.Tongue d.Intestine
14	Anteior two-third of the tongue receives gustatory fibres from
	a.Hypoglossal nerve b.Chordatympani nerve c.Glossopharyngeal nerve d .Vagus nerve
15	Osseous labyrinth is part of
	a.External ear b.Middle ear c.Internal ear d.Larynx
16	Tapetum is part of
	a.Choroid b.Cornea c.Sclera d.Iris
17	The area of auscultation of heart in ox is
	a.2nd and 3rd intercostal space on right b.6th and 7th intercostal space on left c.4th and 5th intercostal space on right d. 4th and 5th intercostal space on left
18	Quadrate bone of fowl is a homologue of mammalian
	a.Stapes b.Incus c.Malleus d.All of the above
19	Masticatory muscles are supplied by
	a.Ophthalmic nerve b.Maxillary nerve c.Mandibular nerve d.Facial nerve
20	An example for hinge joint is
	a.Knee joint b.Hip joint c.Elbow joint d.Atlanto-axial joint

III.State true or false **(0.5x20=10 Marks)**

1	Sino-atrial node is present in the atrium ventriculi	
2	Facial tuberosity is present in ox	
3	In fowl ulna is smaller,shorter and slender than radius	

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4	Anterior circumflex artery of humerus terminates on biceps brachii muscle	
5	Mediastinal lobe is the smallest lobe of right lung	
6	Deep pectoral muscle inserts on the medial tuberosity of humerus	
7	Lateral masses are associated with nasal bone	
8	Hippocampus of the brain is concerned with olfaction	
9	Sternum of dog consists of eight sternebrae	
10	Lateral ventricles are separated by interventricular septum	
11	Extensor carpi radialis inserts to 3rd phalanx	
12	Triceps brachii muscle is supplied by ulnar nerve	
13	Pulmonary artery opens into left atrium of heart	
14	Left brachial artery arises from brachiocephalic artery	
15	Inferior brachium is concerned with auditory reflexes	
16	Styloid process of cervical vertebrae are also called as cervical ribs in fowl	
17	Recurrent laryngeal nerve is a branch of vagus nerve	
18	Ribs are deeply embedded in the lungs of ox	
19	Trigeminal nerve arises from medulla oblongata	
20	Preganglionic nerve fibre is longer than the post-ganglionic in sympathetic nervous system.	

IV.Match the following **(0.5x10=5.0 Marks)**

Sl.No.	Column A		Column B
1	Caruncula sublingualis		Interventricular septa
2	Splint bones		Cerebellum
3	Os suffraginis		Stifle joint
4	Os coronae		Brain
5	Sella turcica		Whartons duct
6	Ossific tentorium		Small metacarpal
7	Moderator band		Sphenoid bone
8	Arbor vitae		Interparietal bone
9	Menisci		First phalanx
10	Meninges		Second phalanx

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PART-B (SUBJECTIVE TYPE) 60 MARKS

V. Write short notes on any Eight of the following **(5.0x8=40 Marks)**

1. Tongue of ox
2. Sternum of fowl
3. Ventricles of the heart
4. Muscles of the forearm
5. Brachial plexus
6. Frontal bone of ox
7. Oesophagotomy
8. Corpora quadrigemina
9. Dental formula and types of teeth in ox, horse, dog and pig
10. Muscles of the eyeball

VI. Write an essay on any two of the following **(10x2=20 Marks)**

1. Humerus of ox, horse and dog
2. Collateral branches of brachial artery
3. Lungs of ox, horse, dog and fowl

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KERALA VETERINARY AND ANIMAL SCIENCES UNIVERSITY

FACULTY OF VETERINARY & ANIMAL SCIENCES

FIRST ANNUAL PROFESSIONAL EXAMINATION- COMPARTMENTAL

OCT-NOV-2017

VETERINARY ANATOMY - PAPER –I

Total Time: 3 hours **Total Marks-100**

Date: 28-10-2017 **Time: 10 a.m. to 1 p.m.**

Instructions to the candidate

1. **Ensure that this Q. paper contains 6 printed pages**
2. **Attempt all questions of PART-A in the Q. paper itself.**
3. **Since any kind of over writing will not be considered and counted,read the questions well before answering them.**
4. **Do not write your name or admission numberanywhere in the Q. paper.**
5. **This Q. paper has to be attached securely with the main answer book.**

PART-A (OBJECTIVE) **MARKS-40**

I. FILL IN THE BLANKS 28 X 0.5 mark =14

1.Flatarticular area is known as ----------.

2. ---------- is an example of a pivot joint.

3. ---------- covers the heart.

4. Over distension of ventricles of the heart is prevented by ---------- structure.

5. Tympanic bulla of temporal bone encloses ---------- part of the ear.

6.Scleralossicles are present in the eye of----------.

7.---------- connects the muscle to bone.

8.Tentoriumcerebelli is present in the ----------fissure of brain.

9.----------is the superficial head of deep digital flexors of the forearm.

10.Ulna is larger than radius in ----------.

11.Osnavicularis is the other name for ----------.

12. In horse, number of proximal sesamoids in each forelimb is----------.

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13.----------is the vestigial muscle in the medial aspect of elbow in ox.

14.Scapula is the sabre shaped bone in ----------

15. In horse, Papilla salivalis is located at the level of ----------upper cheek tooth.

16. Soft palate is absent in ----------

17. Mental foramen is often two or three in --------- (animal).

18.---------- is the largest facial bone in ox.

19. Upper lip muscles are innervated by ---------- nerve.

20.Homologous of cervical ribs are present in ----------(species)

21.In horse, Guttural pouches are diverticulum of ----------.

22.Sternum of dog consists of ---------- number of sternebrae.

23.---------- called true voice box in fowl.

24. In ox,tracheal rings are connected dorsally through ---------- ligament.

25. Lungs get blood supply through ---------- artery.

26.Inter lobar fissures are relatively very deep in the lungs of----------.

27. In disc prolapse,----------part of intervertebral disc prolapses.

28.----------process is well developed in thoracic vertebrae

II.Choose the correct answer& write down the alphabet in the bracketed space. No overwriting allowed. (28 X 0.5 mark =14)

1.Osrostri is an example for ( )

a. Splanchnic bone b. Pneumatic bone c. Short bone d. Sesamoid bone

2. Example for hinge joint is ( )

a. Shoulder joint b. Elbow joint c. Carpal joint d .Hip joint

3. Which is not a unguligrade animal ( )

a. Ox b. Dog c. Horse d. Pig

4.Aorta originates from ( )

a. Right ventricle b. Left ventricle c. Right atrium d. Left atrium

5.---------- artery is used for taking pulse in horse ( )

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a. External maxillary b. Ventral coccygeal c. Femoral d. Ulnar artery

6.----------is responsible for equilibrium ( )

a.Cochlea b .Semicircular canals c. Eustachian tube d. Ear drum

7.Pecten is present in the eye of ( )

a. Ox b. Fowl c. Horse d. Pig

8. In dog, coronoid and olecranon fossae are communicated through ---------( ).

a. Nuterient foramen b.Supra trochlear foramen

c.Epichondyled.Summit of olecranon process

9.Dental star is used to determine the age of ---------- . ( )

a. Horse b. Dog c. Pig d. Ox

10. Salivary glands are absent in ( )

a. Ox b. Horse c. Sheep d. Fowl

11.Infra orbital nerve is the branch of ( )

a. Trigeminal nerve b. Facial nerve

c.Glossophrangeal nerve d. Spinal accessory nerve

12. Collateral radial artery is the branch of ( )

a. Brachial artery b. Median artery

c. Ulnar artery d. Radial artery

13.Ulnarislateralis is innervated by ( )

a. Median nerve b. Ulnar nerve

c. Radial nerve d. Axillary nerve

14.Deltoideus is supplied by ( )

a. Posterior circumflex artery b.Anterior circumflex artery

c. Supra scapular artery d. Median artery

15.Crop is the diverticulum of ( )

a. Pharynx b. Trachea c. Larynx d.Oseophagus

16. Masseteric fossa is present in the mandible of ( )

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a.Dog b. Ox c. Horse d. Fowl

17. Organ of jacobson is related with ( )

a. Hearing b. Taste c. Touch d. Olfaction

18. Largest foramen in the skull is ( )

a. Foramen ovaleb. Foramen orbitorotundum

c. Foramen magnum d. Hypo glossal foramen

19.Sulcus lingua is present in the tongue of ( )

a. Ox b. Pig c. Dog d. Horse

20.Hard palate is ridged throughout in ( )

a. Ox b. Horse c. Fowld. Sheep

21.Unpaired cartilage present in the larynx is ( )

a. Cricoid cartilage b. Thyroid cartilage

c. Epiglottis d. Artynoid cartilage

22. Unpaired vein present on the roof of the thoracic cavity is ( )

a. Caudal venacava b. Vena hemi azygus

c. Cardiac vein d. Cranialvenacava

23.---------- organ will regress as the bird matures. ( )

a. Thyroidb. Bursa of fabriciusc.Lymphnode d. Spleen

24. Inter lobar fissures not distinct in the lungs of ( )

a. Oxb. Horse c. Sheep d. Dog

25.Haemal lymph nodes are more common in ( )

a. Oxb. Horse c. Dog d. Pig

26.Costal cartilages are made up of ( )

a. White fibro cartilage b. Hyaline cartilage

c. Elastic cartilage d. Yellow elastic sheet

27. First branch of thoracicaorta is ( )

a. Dorsal artery b. Cardiac artery

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c. Brachiocephalic trunk d. Axillary artery

28. Largest Unpaired muscle in the body is ( )

a.Lattismusdorsib.Buccinator

c.Brachiocephalicusd.Diaphargm

III. Match column A with column B. Write the numeral in the space provided.

(12 X 0.5 mark = 6)

	A		B
a	Dorsal sesamoids		1.Inspiration
b	Cranial opening of mouth		2.Deep brachial artery
c	Middle ear		3.Sensitive sole
d	Inner ear		4.Dog
e	Coffin joint		5.Musculo cutanenous nerve
f	Diaphragm		6.First and second interphalngeal joint
g	Pastern joint		7.Expiration
h	External intercostals muscles		8.Cochlea
i	Tricpesbrachii		9.Isthmus faucium
j	Biceps brachii		10.Eustachian tube
k	Frog		11.Second and third interphalngeal joint
l	Caudal opening of mouth		12.Rima oris

IV. Examine the following statements & state true or false. (12X0.5 mark = 6)

1.In left side of neck , recurrent laryngeal nerve is not included within the carotid sheath( )

2.Ganglionimpar is concerned with parasympathetic system ( )

3.Trigeminal nerve is a mixed nerve ( )

4.Thoracic cavity is lined by pericardium ( )

5.Foliate papillae are present in the tongue of horse ( )

6. Foramen of Munro connects third and fourth ventricles ( )

7.Sternum of ox is of pneumatic bone ( )

8.Cornual nerve is the branch of facial nerve ( )

9.The muscle runs below the ventral aspect of bodies of thoracic vertebrae is transversethoracis ( )

10.Arbor vitae is noticed in the cerebrum ( )

11.Synovial joint is a movable joint ( )

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12.Upper lip muscles are supplied by superior labial artery ( )

PART –B(SUBJECTIVE) **60 MARKS**

V. Define the following terminologies in one or two sentences **(5 X 1 mark= 5)**

1. Periosteum 2.Carpo metacarpus3.Phrenic nerve

4.Ligamentumvenosis 5. Corpus callosum

VI. Substantiate or give reasons for the following statements in two or three sentences

(5 X 1 mark= 5)

1. Oesophageal choke is common at thoracic inlet

2. In dog,dragging of forelimb is noticed in radial nerve paralysis.

3.Pneumatic bones are more noticed in fowl.

4.Terminal portion of spinal card is known as caudaequine.

5. External maxillary vein is of clinical importance in horse.

VII. Write short notes (not to exceed 200 words) on any fiveof the following. (Draw diagrams/ flow chart where ever necessary) **(5 X 5 marks = 25)**

1.Pectoral girdle of fowl 2. Ventricles of heart 3.Retemirablicerebri

4.Parts of tooth 5.Muscles of neck ventral region with their blood and nerve supply

6.Sympathtic system 7.Surgical anatomy for oesophagotomy

VIII. Describe in detail (not to exceed 600 words) on any two of the following. (Draw diagrams/ flow chart where ever necessary) **(2 X 10 marks = 20)**

1.Enumerate the cranial nerves in order and describe the course of trigeminal nerve

2.Classification of joint based on various parameters

3. Describe the boundaries of the thoracic cavity, pleural reflections and the lungs of ox

XXXX

Sumana K-B

KERALA VETERINARY AND ANIMAL SCIENCES UNIVERSITY

FACULTY OF VETERINARY & ANIMAL SCIENCES

SECOND ~~THIRD~~ ANNUAL BOARD EXAMINATION- NOV-DEC 2017

VETERINARY ANATOMY – PAPER-II

Total Time: 2 hours | Total Marks-60

Date:-17-11-2017 | Time: 10 a.m.to 12noon

Instructions to the candidate

1. Ensure that this Q. paper contains 4 printed pages
2. Attempt all questions of PART-A and C in the Q. paper itself.
3. Do not write your name or admission number anywhere in the Q. paper.
4. This Q. paper has to be attached securely with the main answer book.

PART-A

18 marks

I. Fill in the blanks: (0.5 mark X 12 blanks= 6)

1. The thickened area of adhesions between cells are called _____
2. The lining epithelium in the mucous membrane of urinary system is _____ epithelium
3. Pacinian corpuscle are _____ receptor
4. Crypts of Lieburkuhn are simple tubular glands found in the lamina propria of _____ (organ)
5. Bowman's capsule and glomerulus together form _____ in kidney
6. Accumulation of neurosecretions in the pituitary gland is called _____
7. _____ are organs to protect tahe embryo and provide for its nutrition and excretion
8. Failure of complete fusion of mandibular process in the development of face is called _____
9. The primodium of respiratory system is _____
10. _____ is the temporary sac for storage of urine of foetus
11. Two methods of bone formation are _____ and _____

II. Match column A with column B. Write the alphabet in the space provided.

(0.5 mark X 12 = 6)

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1	Centrioles		a	Hydrochloric acid
2	Wharton's jelly		b	Pepsin
3	Bone		c	Mitosis
4	Cardiac muscle		d	Mucous connective tissue
5	Chief cells		e	Haversian system
6	Parietal cells		f	Intercalated disc
7	Optic vesicle		g	Ectoderm
8	Pancreas		h	Mesoderm
9	Nervous system		i	Endoderm
10	Spleen		j	Amphioxus
11	Microlecithal eggs		k	Birds
12	Discoidal eggs		l	eye

III. State whether the following statements are true or false (0.5 mark X 12 = 6)

1. Connective tissue have few cells and large amount of intercellular substances
2. The three types of cartilage tissues are fibrous, elastic and reticular cartilage
3. Intervertebral cartilage is a fibro cartilage
4. Nissl bodies are chromophil substance found in neuroglial cells
5. Taste buds are absent in filiform papillae
6. Circum anal gland is present in horse
7. The sperm has XY chromosome
8. The site of fertilisation is uterus in cows
9. Zonary type placenta is present in horses
10. The first site of blood formation is the area vasculosa in yolk sac
11. Muscularis mucosa is absent in rumen
12. Leydig's cells are seen in the kidney

PART B

IV. Write short notes (not to exceed 120 words) on any two of the following. (Draw diagrams/ flow chart where ever necessary) (2 marks X 2 = 4)

1. Stratified squamous epithelium
2. Histology of Adrenal gland
3. Foetal circulation

V..Describe in detail with necessary flow chart /.diagram on any two of the following (4 mark X 2 = 8)

1. Classification of glands with examples
2. Histology of Liver with diagram
3. Development of kidney with diagram

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PART-C

VI. Fill in the blanks: **(0.5 mark X 12 blanks= 6)**

1. _____ is the organ of prehension in sheep
2. The dental formula of cattle is _____
3. _____ is the largest of the body cavities
4. Paired caeca is a feature of _____ (species)
5. _____ is called abdominal salivary gland
6. The organ of voice in birds is _____
7. _____ is protrusion of organ through natural orifice without any covering of skin
8. Amputation of horn is performed under _____ nerve block
9. _____ artery is used for counting pulse rate in cattle
10. The paired laryngeal cartilage is _____
11. The depression present on the surface of ovary of mare is _____
12. Glandular and nonglandular part of stomach of horse is separated by _____

VII. Match the following. Write the alphabet in the space provided.

(0.5 mark X 12 = 6)

1	Zygomatic salivary gland		a	Surgical removal of ovaries
2	Saccuscaecus		b	Dog
3	Crop		c	Epiploic foramen
4	Foramen of winslow		d	Fowl
5	Spaying		e	Honey comb
6	Reticulum		f	Horse
7	Gizzard		g	Cattle
8	Circumvallate papilla		h	Lymphoid tissue in fowl
9	Bursa of Fabricious		i	Muscular stomach
10	Phallus		j	Diaphragm
11	Elliptical spleen		k	Copulatory organ
12	Hiatus aorticus		l	Taste buds

VIII. State true or false (0.5 mark X 12 = 6)

1. In horse papilla salivalis is at upper fourth cheek tooth
2. In cattle, mandibular salivary gland is the largest salivary gland
3. The double fold than attaches intestine to dorsal abdominal wall is omentum
4. Rectum is the terminal part of digestive system and is located on floor of pelvic cavity
5. Kicking behind is not possible in cattle due to the present of round ligament
6. The right kidney of horse is heart shaped

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7. Space between 3rd and 6th rib on left side of dog is the best site for auscultation of heart
8. Rumen is located on the left side of abdomen and extends from 7/8th rib to pelvic inlet
9. Surgical operations on abdominal cavity are performed under epidural anesthesia
10. Accumulation of fluid in spermatic cord is called as hydrocoel
11. Spleen in fowl is seen between ascending and descending parts of duodenum
12. Open method of castration is performed in dogs

PART -D

IX. Write short notes (not to exceed 120 words) on any two of the following. (Draw diagrams/ flow chart where ever necessary) (2 marks X 2 = 4)

1. Air sacs in fowl
2. Larynx in cattle
3. List common nerve blocks in cattle and explain corneal nerve block

X. Describe in detail with necessary flow chart / diagram on any two of the following (4 mark X 2 = 8)

1. Describe and compare live of ox, horse and dog
2. Describe kidney of ox
3. Describe the stomach interior of ox

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KERALA VETERINARY AND ANIMAL SCIENCES UNIVERSITY
FACULTY OF VETERINARY AND ANIMAL SCIENCES
1st YEAR B.V.Sc.&A.H. Annual Professional Examination
JULY-AUGUST -2018
VETERINARY ANATOMY- PAPER-I

Total Time: 3 Hours **Total Marks: 100**

PART-A (OBJECTIVE TYPE) 40 Marks

I. Fill in the blanks **(1.0x15=15 Marks)**

1	A depression that leads to two or more foramina is called as----------
2	Tip of the tongue is _____shaped in horse
3	Buccal cavity and pharynx communicate through------
4	Serous membrane lining the thoracic cavity is------
5	Median artery terminates into ---------- and ----------
6	Obturator nerve is a branch of ----------
7	A broad fibrous expansion of a muscle is called as ----------
8	Third and fourth ventricles of the brain communicates through--------
9	The nuclei on the floor of the lateral ventricles are ---------- and ----------
10	The artery used for feeling pulse in the facial region of the ox is ----------
11	The fourth cheek tooth of dog is termed as ------
12	The transparent and avascular part of the eye is ----------
13	Pulley-like articular area is termed as----------
14	The scleral ossicles are present in the eye ball of ----------
15	The largest parasympathetic ganglion is ----------

II. Choose the correct answer **(0.5x20=10 Marks)**

1	Number of pairs of sternal ribs in ox
	a. Six b. Eight c.Five d. Ten
2	Scapular tuberosity is present in
	a.Ox b.Horse C.Dog D.Pig
3	The muscle located in the musculospiral groove of the humerus is
	a.Brachiocephalicus b.Biceps brachii c.Brachialis d.Biceps femoris
4	The olecranon and coronoid fossae communicate through
	a.Supratrochlear foramen b.Foramen triosseum c.Obturator foramen d.Volar foramen
5	Distal extremity of fibula is called as
	a.Medial malleolus b.Lateral malleolus c.Fabella d.Patella

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6	In horse the cow kick is prevented by
	a.Round ligament b.Accessory ligament c.Collateral ligament d.Cruciate ligament
7	The largest venous trunk in the body is
	a.Cephalic vein b.Recurrent tarsal vein c.Anterior vena cava d.Posterior vena cava
8	The ligament that helps the horse to stand for long time is
	a.Check ligament b.Sesamoidian ligament c.Arciform ligament d.Capsular ligament
9	The largest paranasal sinus in ox is
	a.Frontal b.Maxillary c.Palatine d.Sphenoid
10	In ox, the papilla salivalis is located at the level of
	a.Upper 3rd cheek tooth b.Upper 5th cheek tooth c.Lower 3rd cheek tooth d.Lower 5th cheek tooth
11	Optic papilla is otherwise called as
	a.Blind spot b.Macula lutea c.Tapetum fibrosum d.Pars ciliaris retina
12	The site for median neurectomy operation is
	a.Below the elbow on medial aspect b.Below the elbow on lateral aspect c.Above the accessory carpal on lateral aspect d.Above the accessory carpal on posterior
13	Lyssa is a fusiform fibrous cord present in
	a.Oesophagus b.Stomach c.Tongue d.Intestine
14	Anteior two-third of the tongue receives gustatory fibres from
	a.Hypoglossal nerve b.Chordatympani nerve c.Glossopharyngeal nerve d .Vagus nerve
15	Osseous labyrinth is part of
	a.External ear b.Middle ear c.Internal ear d.Larynx
16	Tapetum is part of
	a.Choroid b.Cornea c.Sclera d.Iris
17	The area of auscultation of heart in ox is
	a.2nd and 3rd intercostal space on right b.6th and 7th intercostal space on left c.4th and 5th intercostal space on right d. 4th and 5th intercostal space on left
18	Quadrate bone of fowl is a homologue of mammalian
	a.Stapes b.Incus c.Malleus d.All of the above
19	Masticatory muscles are supplied by
	a.Ophthalmic nerve b.Maxillary nerve c.Mandibular nerve d.Facial nerve
20	An example for hinge joint is
	a.Knee joint b.Hip joint c.Elbow joint d.Atlanto-axial joint

III.State true or false **(0.5x20=10 Marks)**

1	Sino-atrial node is present in the atrium ventriculi	
2	Facial tuberosity is present in ox	
3	In fowl ulna is smaller,shorter and slender than radius	

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4	Anterior circumflex artery of humerus terminates on biceps brachii muscle	
5	Mediastinal lobe is the smallest lobe of right lung	
6	Deep pectoral muscle inserts on the medial tuberosity of humerus	
7	Lateral masses are associated with nasal bone	
8	Hippocampus of the brain is concerned with olfaction	
9	Sternum of dog consists of eight sternebrae	
10	Lateral ventricles are separated by interventricular septum	
11	Extensor carpi radialis inserts to 3rd phalanx	
12	Triceps brachii muscle is supplied by ulnar nerve	
13	Pulmonary artery opens into left atrium of heart	
14	Left brachial artery arises from brachiocephalic artery	
15	Inferior brachium is concerned with auditory reflexes	
16	Styloid process of cervical vertebrae are also called as cervical ribs in fowl	
17	Recurrent laryngeal nerve is a branch of vagus nerve	
18	Ribs are deeply embedded in the lungs of ox	
19	Trigeminal nerve arises from medulla oblongata	
20	Preganglionic nerve fibre is longer than the post-ganglionic in sympathetic nervous system.	

IV.Match the following **(0.5x10=5.0 Marks)**

Sl.No.	Column A		Column B
1	Caruncula sublingualis		Interventricular septa
2	Splint bones		Cerebellum
3	Os suffraginis		Stifle joint
4	Os coronae		Brain
5	Sella turcica		Whartons duct
6	Ossific tentorium		Small metacarpal
7	Moderator band		Sphenoid bone
8	Arbor vitae		Interparietal bone
9	Menisci		First phalanx
10	Meninges		Second phalanx

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PART-B (SUBJECTIVE TYPE) 60 MARKS

V. Write short notes on any Eight of the following **(5.0x8=40 Marks)**

1. Tongue of ox
2. Sternum of fowl
3. Ventricles of the heart
4. Muscles of the forearm
5. Brachial plexus
6. Frontal bone of ox
7. Oesophagotomy
8. Corpora quadrigemina
9. Dental formula and types of teeth in ox, horse, dog and pig
10. Muscles of the eyeball

VI. Write an essay on any two of the following **(10x2=20 Marks)**

1. Humerus of ox, horse and dog
2. Collateral branches of brachial artery
3. Lungs of ox, horse, dog and fowl

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