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Total Number of Pages 16

**B.V.Sc. & A.H. (First Professional) Examination – 2022**

**Veterinary Physiology Paper -II**

(MSVE 2016)



**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 overleaf for general instructions.

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	
Q. No.	Marks
1.	
2.	
3.	
4.	
5.	
Total	

Total Marks obtained:

In figures: ..... In words: .....

Signature of examiner: .....



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**B.V.Sc. & A.H. (First Professional) Examination – 2022**  
**Veterinary Physiology Paper –II**  
**(MSVE 2016)**

Time: Three Hours

Maximum Marks: 100  
Weightage: 20

Unit-3 : Excretory and Endocrine Systems.

Unit-4 : Reproduction, Lactation, Growth and Environmental Physiology.

**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.

**Q.1 Fill in the blanks.**

(20x0.5 = 10)

- 1.1 \_\_\_\_\_ is an example of long-day breeder animal.
- 1.2 \_\_\_\_\_ helps to regulate energy balance by inhibiting hunger, which in turn diminishes fat storage in adipocytes.
- 1.3 \_\_\_\_\_ is hypoglycemic hormone.
- 1.4 Chalcones act as inhibitor of \_\_\_\_\_ activity of cells.
- 1.5 \_\_\_\_\_ is an example of monoestrus animal.
- 1.6 \_\_\_\_\_ is more influential on peripheral vasoconstriction and blood pressure.
- 1.7 \_\_\_\_\_ provides a more reliable measure to estimate the age of the fetus.
- 1.8 Sweat glands are absent in \_\_\_\_\_.
- 1.9 Mammary gland growth shows \_\_\_\_\_ shape of curve.
- 1.10 \_\_\_\_\_ part of brain is involved in anger, excitement, sexual activities and hunger.
- 1.11 Creatinine is an end product from the metabolic breakdown of \_\_\_\_\_.
- 1.12 Kidneys of birds can synthesis nitrogenous end product called \_\_\_\_\_.
- 1.13 The content of  $\alpha$ -lactalbumin in the mammary tissue is an indicator of \_\_\_\_\_.
- 1.14 \_\_\_\_\_ is the act of mating in sheep.
- 1.15 \_\_\_\_\_ side ovary is functional in case of the birds.



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- 1.16 The color of eggs is responsible for secretion through \_\_\_\_\_ part of oviduct.
- 1.17 A glans penis is present in \_\_\_\_\_ animals.
- 1.18 \_\_\_\_\_ is the variable constituent of the milk.
- 1.19 \_\_\_\_\_ experiment shows the classical conditioning kind of the learning.
- 1.20 Differentiation of the \_\_\_\_\_ tissues are often occurs before the birth only.

**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: (20x0.5 = 10)**

- 2.1 Allen's Rule stated or related to ( )  
1. Internal body changes with climate  
2. Extremities of the body  
3. Body coat color  
4. Insulating cover
- 2.2 ANP is released from organ ( )  
1. Liver  
2. Kidneys  
3. Heart  
4. Spleen
- 2.3 Which one of the following is NOT amino acid derivative hormone ( )  
1. T<sub>3</sub>  
2. Melatonin  
3. CRH  
4. Epinephrine
- 2.4 Which is the correct sequence for cleavage of embryo ( )  
1. Zygote - Gastrula - Morula - Blastocyst  
2. Gastrula - Zygote - Morula - Blastocyst  
3. Zygote - Morula - Blastocyst - Gastrula  
4. Morula - Zygote - Blastocyst - Gastrula
- 2.5 Summer sleep is also called as ( )  
1. Aestivation  
2. Hibernation  
3. Torpor  
4. Simple sleep
- 2.6 Types of nephrons are present in birds ( )  
1. Reptilian type  
2. Mammalian type  
3. Both 1 & 2  
4. Only reptilian type
- 2.7 The behaviour indicates preference to live in flocks or herds ( )  
1. Social dominance  
2. Communication behaviour  
3. Gregarious behaviour  
4. Agonistic behaviour



- 2.8 Which is NOT a sensible heat loss mechanism? ( )
1. Radiation
  2. Sweating
  3. Conduction
  4. Convection
- 2.9 Which of the following synthesized in posterior pituitary ( )
1. ADH
  2. CRH
  3. ACTH
  4. None
- 2.10 Loop is responsible to permeable to water but impermeable to salt ( )
1. Thin descending limb
  2. Thick descending limb
  3. Thin ascending limb
  4. Thick ascending limb
- 2.11 Length of estrus in mare is ( )
1. 18 hours
  2. 29 hours
  3. 2-3 days
  4. 4-8 days
- 2.12 Ureotelic animals excrete nitrogenous end product in their excreta ( )
1. Ammonia
  2. Urea
  3. Uric acid
  4. Ureome
- 2.13 Which compound is not used to measure GFR ( )
1. PAH
  2. Inulin
  3. Creatinine
  4. Urea
- 2.14 Iodine is present in the hormone ( )
1. Oxytocin
  2. Leptin
  3. FSH
  4. Thyroxine
- 2.15 Growth process involves increase in the number of the body cells are called as ( )
1. Compensatory growth
  2. Intussusceptive growth
  3. Hypertrophic growth
  4. Hyperplastic growth
- 2.16 Free running period is controlled by hormone ( )
1. ACTH
  2. Melatonin
  3. Neurine
  4. TSH



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- 2.17 Diffuse type of placenta found in ( )
  - 1. Cows
  - 2. Mare
  - 3. Cat
  - 4. Monkeys
- 2.18 Urinary bladder is developed from layer during embryogenesis ( )
  - 1. Endoderm
  - 2. Ectoderm
  - 3. Mesoderm
  - 4. Neuroderm
- 2.19 Pancreas produces glucagon by cells ( )
  - 1. Alpha cell
  - 2. Beta cell
  - 3. Delta cell
  - 4. Gamma cell
- 2.20 Gestation period of buffaloes is ( )
  - 1. 280 days
  - 2. 310 days
  - 3. 340 days
  - 4. 365 days

**Q.3 Attempt any ten out of the following twelve questions. Answer of each question should be in 2 to 3 lines. (10x2.0= 20)**

3.1 Why color of urine is yellow?

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3.2 Kidney is an important organ for blood production. Why?

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3.3 Define Nephron.

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3.4 Pups are born with closed eyes and remain physically inactive for few days. Why?

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3.5 Name few tissue specific growth factors for development and proliferation of the bells

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3.6 What do you mean by false growth?

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3.7 Define Circadian rhythm?

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3.12 Name different period of the estrous cycle.

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Q.4 Attempt any six out of the following eight questions. Answer of each question should be in 8 to 10 lines. (6 x 6.0 = 36)

4.1 Spermatogenesis in the testis.

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4.2 Lactose synthesis in udder tissues

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4.3 Explain different ingestive behaviour in animals.

4.4 Factors influencing postnatal growth.



4.5 Glucose homeostasis in the body.

Handwriting practice lines for question 4.5, consisting of multiple sets of dashed lines on a solid background.

4.6 Chemical classification of the hormones.

Handwriting practice lines for question 4.6, consisting of multiple sets of dashed lines on a solid background.

4.7 Hormones of neurohypophysis.

Handwriting practice lines for question 4.7, consisting of multiple sets of dashed lines on a solid background.

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4.8 Egg synthesis in oviduct.

- Q.5 Answer the following question in 1-2 pages (attempt any two). (2x12.0 = 24)**
- 5.1 Define parturition. Explain the different physiological stages of parturition in cows.
  - 5.2 Define hormone. Explain the mechanism of the hormone activating target cells.
  - 5.3 Define urine. Explain different steps for urine formation.

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