

**B.V.Sc. & A.H. (First Professional) Examination – 2023**  
**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 Corticotropin-releasing hormone stimulate the release of .....
- 1.2 Prolactin is produced by pituitary gland cells called .....
- 1.3 Insulin like growth factor I, previously known as .....
- 1.4 ..... are used commonly in veterinary medicine to duplicate the biological effects of LH and FSH.
- 1.5 ..... cells of the adrenal medulla of animals are a part of the endocrine system.
- 1.6 In cattle and sheep, the ovary is ..... shaped.
- 1.7 The interstitial cells that are located among the seminiferous tubules are named .....
- 1.8 The hormone released from heart that regulate the ECF sodium level is .....
- 1.9 Study of behavior of animal is called .....
- 1.10 Flehmen reflex occurs due to .....
- 1.11 ..... hormone increases peripheral utilization of glucose..
- 1.12 Extra pituitary gonadotropin having action similar to LH is .....
- 1.13 ..... cells secrete androgen binding protein.
- 1.14 ..... is the tuft of capillaries formed from the afferent arterioles in nephron.
- 1.15 Change in meteorological variables within 24 hours is called .....
- 1.16 ..... ovulate after end of estrus phase.
- 1.17 In pregnant animal corpus luteum is called .....

- 1.18 Maintenance of milk secretion is called .....
- 1.19 Malpighian corpuscle is also called .....
- 1.20 ..... plays an important role in the regulation of spermatogenesis by inhibiting FSH secretion.

**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 All hypophysiotropic hormones except dopamine are- ( )
1. Steroid
  2. Peptide
  3. Amine
  4. None of the above
- 2.2 Which of the following pituitary hormone/s was/were regulated by both releasing and inhibitory hormones secreted by hypothalamus- ( )
1. Prolactin
  2. Growth hormone
  3. TSH
  4. All of the above
- 2.3 The parathyroid glands of animals contain a single basic type of secretory cells termed - ( )
1. Chief cells
  2. Oxyphil cells
  3. Transitional cells
  4. None of the above
- 2.4 Vitamin-D is necessary for- ( )
1. Osteoclastic resorption
  2. Calcium mobilization
  3. Both '1' and '2'
  4. None of the above
- 2.5 Glucocorticoids are among the most widely used therapeutic agents in veterinary medicine due to their- ( )
1. Anti-inflammatory properties
  2. Immuno-suppressive properties
  3. Both '1' and '2'
  4. None of the above
- 2.6 What is the source of energy for spermatozoa in the semen of stallion? ( )
1. Inositol
  2. Sorbitol
  3. Glucose
  4. Fructose
- 2.7 Induced ovulation is seen in - ( )
1. Rat
  2. Rabbit
  3. Mare
  4. Cow

- 2.8 Prenatal growth includes- ( )  
1. Cleavage  
2. Differentiation  
3. Organogenesis  
4. All of the above
- 2.9 Erythrocytes are placed in a solution that causes them to hemolyze. The solution must be- ( )  
1. Isotonic  
2. Hypertonic  
3. Hypotonic  
4. None of the above
- 2.10 The hormone which usually synthesized and are not stored- ( )  
1. Protein hormone  
2. Steroid hormone  
3. Adrenal medullary hormone  
4. All of the above
- 2.11 Tubular fluid is transported from the Bowman capsule to the renal pelvis by- ( )  
1. Action of cilia  
2. Peristalsis  
3. Hydrostatic pressure gradient  
4. Bucket brigade
- 2.12 Sodium is reabsorbed from except- ( )  
1. Descending limb of loop of Henle  
2. PCT  
3. Collecting duct  
4. None of the above
- 2.13 Prenatal growth involves- ( )  
1. Cleavage  
2. Differentiation  
3. Organogenesis  
4. All of the above
- 2.14 Agonistic behaviour indicates- ( )  
1. Aggression  
2. Feeding  
3. Sexual behavior  
4. Grouping
- 2.15 Parturition is initiated by- ( )  
1. Mechanical factors associated with dam  
2. Relaxin  
3. Foetal ACTH  
4. Prostaglandins
- 2.16 The process which prevent polyspermy in higher mammals are- ( )  
1. Capacitation  
2. Immunosuppression  
3. Zona reaction  
4. Glycolysis

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2.17 The primary motor centre for shivering is located in - ( )

1. Posterior pituitary
2. Anterior pituitary
3. Anterior hypothalamus
4. Posterior hypothalamus

2.18 The basic hormones which is necessary for the growth and development of mammary gland - ( )

1. Estrogen
2. Progesterone
3. Both (1) and (2)
4. Prolactin

2.19 Solar radiation is measured by - ( )

1. Compbell stoke's sunshine recorder
2. Symon's guage
3. Psychrometric chamber
4. All of the above

2.20 Hormones that stimulate pigeon crop gland to secrete crop milk- ( )

1. Oxytocin
2. ADH
3. Prolactin
4. Estrogen

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 Define lactogenesis.

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3.2 What is parturition?

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3.3 Write functions of testosterone in fetal life.

Four sets of horizontal dashed lines for writing the answer to question 3.3.

3.4 What are seminal vesicles.

Four sets of horizontal dashed lines for writing the answer to question 3.4.

3.5 Write functions of fallopian tubes.

Four sets of horizontal dashed lines for writing the answer to question 3.5.

3.6 What is primordial follicle.

Four sets of horizontal dashed lines for writing the answer to question 3.6.

3.7 What is ovulation.

Four sets of horizontal dashed lines for writing the answer to question 3.7.

Please write your Roll Number above this line

3.8 Enumerate hyperactivity of adrenal cortex.

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3.9 Write functions of pineal gland.

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3.10 What is paracrine gland.

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3.11 Define micturition.

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3.12 Write the name of structure found in juxtaglomerular apparatus.

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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 Explain endocrine function of testis.

4.2 Describe secondary sexual characters in females.

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4.3 Describe process of ovulation in cow.

4.4 Explain role of hormones in lactation.



Please write your Roll Number above this line

4.5 Explain milk ejection reflex.

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4.6 Describe mechanism of action of steroid hormones.

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4.7 Explain disorders of anterior pituitary gland.

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4.8 Describe endocrine functions of kidney.

Q.5 Answer the following question in 1-2 pages (attempt any two). (2x12.0 = 24)

5.1 Give an account of estrous cycle and explain different phases of estrous cycle in cow.

5.2 Give an account of hypothalamo-hypophyseal relations.

5.3 What is counter current mechanism? Describe the anatomical and physiological basis of counter current mechanism in kidney.