

Duration : 3 hours

(Total Marks : 75)

**N.B. 1. All questions are compulsory**

**2. Figures to the right indicate full marks.**

**Q1. Choose the correct alternative for the following.**

**20 M**

- 1) \_\_\_\_\_ is one of the enlargements seen when the spinal cord is viewed externally.
  - a. Thoracic enlargement
  - b. Cervical enlargement
  - c. Caudal enlargement
  - d. Sacral enlargement
- 2) \_\_\_\_\_ cells secrete intrinsic factor for vit B12 absorption.
  - a. Chief
  - b. Parietal
  - c. Mucous neck
  - d. G
- 2) The additional volume of air inhaled by taking a deep breath is \_\_\_\_\_.
  - a. Inspiratory capacity
  - b. Inspiratory reserve volume
  - c. Expiratory reserve volume
  - d. Vital capacity
- 4) Kidneys produce the two hormones \_\_\_\_\_ and \_\_\_\_\_.
  - a. Thymosin and Calcitriol
  - b. Glucocorticoids and erythropoietin
  - c. Calcitriol and erythropoietin
  - d. Thymosin & Glucocorticoids
- 5) \_\_\_\_\_ is an example of Exocrine gland
  - a. Sudoriferous
  - b. Thymus
  - c. Pancreas
  - d. Ovaries
- 6) Fluid secreted by the seminal vesicles normally constitutes about \_\_\_\_\_ of the volume of semen.
  - a. 40 %
  - b. 50 %
  - c. 60 %
  - d. 100 %
- 7) \_\_\_\_\_ is the neuroglia which acts as phagocytes in CNS.
  - a. Oligodendrocyte
  - b. Astrocyte
  - c. Microglia
  - d. Schwann cells
- 8) During the \_\_\_\_\_ phase of digestion, the smell, sight, thought, or initial taste of food activates neural centers.
  - a. Gastric
  - b. Cephalic
  - c. Intestinal
  - d. Mechanical

- 9) The basic rhythm of respiration is controlled by \_\_\_\_\_ area.
- Pneumotaxic
  - Apneustic
  - Medullary rhythmicity
  - Cough reflex
- 10) Voiding Phase means.
- Transfer of materials from peritubular capillaries to renal tubular lumen
  - A relaxed bladder in which urine slowly fills in bladder
  - A contracted bladder that forces the external sphincter open and discharges urine through the urethra
  - Solutes and water are removed from the tubular fluid and transported into the blood
- 11) Thyroid-stimulating hormone is secreted by \_\_\_\_\_ glands
- Thyroid
  - Parathyroid
  - Pituitary
  - Adrenal
- 12) \_\_\_\_\_ produces progesterone, estrogens, relaxin, and inhibin hormone
- Corpus luteum
  - Corpus albicans
  - Corpus haemorrhagicum
  - Germinal epithelium
- 13) Which of these is an accessory reproductive gland in male mammals
- Thyroid
  - Ovary
  - Gastric gland
  - Prostate gland
- 14) \_\_\_\_\_ hormone is thought to promote sleepiness
- Thymosin
  - Melatonin
  - Inhibin
  - Glucocorticoids
- 15) The \_\_\_\_\_ parts of the female reproductive system is homologous to the glans penis in males.
- Labia minora
  - Labia majora
  - Clitoris
  - Mons pubis
- 16) \_\_\_\_\_ is the inhalation and exhalation of air and involves the exchange of air between the atmosphere and the alveoli of the lungs.
- Pulmonary ventilation
  - Internal respiration
  - Tissue respiration
  - External respiration

- 17) The four layers of GI tract from deep to superficial are \_\_\_\_\_
- mucosa, submucosa, muscularis, and serosa
  - submucosa, muscularis, mucosa and serosa
  - muscularis, mucosa, submucosa, and serosa
  - serosa, mucosa, submucosa and muscularis
- 18) Which of these areas is the association area in the cerebrum?
- Broca's speech area
  - Primary visual area
  - Primary auditory area
  - Wernicke's area
- 19) A dome shaped portion superior to the uterine tubes is called as \_\_\_\_\_
- Body
  - Fundus
  - Cervix
  - Vagina
- 20) Contraction of the dartos muscle causes the scrotum to become tight which \_\_\_\_\_
- Reduces heat loss
  - Absorb body heat
  - Produce sperm
  - Helps in sperm maturation

**II Answer the following (Any 2 out of 3)**

**20 M**

- Draw a neat labelled diagram of a neuron. Explain the phases of action potential generation in neuron.
- Draw a neat labelled diagram of the respiratory system and write a note on respiratory centers.
- Define and classify hormone and describe location and structure of thyroid gland, synthesis, release and storage of thyroid hormones.

**III Answer the following (Any 7 out of 9)**

**35 M**

- Describe the anatomy and structure of the cerebrum.
- Write in detail the composition, function and formation of Cerebrospinal fluid.
- Draw a neat labelled diagram of histology of the small intestine, and mention the anatomical parts of the small intestine.
- Mention the phases of digestion and describe any two in detail.
- Define Pulmonary ventilation and explain the mechanism of inhalation.
- With the help of neat labelled diagram explain the structure of the urinary bladder.
- Elaborate in detail pancreas as endocrine gland and exocrine gland and describe the regulation of insulin and glucagon secretion.
- Enlist the organs involved in the female reproductive system and describe histology of the ovary.
- Explain in detail various ducts of the male reproductive system.

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