

Duration: 3 hours

Total Marks : 75 M

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

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

**Q1. Choose the appropriate option for following multiple choice based questions. 20M**

- 1 \_\_\_\_\_ is an extension of dura mater that separates two hemispheres of the cerebrum.
  - a Falx cerebri
  - b Falx cerebelli
  - c Tentorium cerebelli
  - d Tentorium cerebri
  
- 2 The majority of the water from the indigestible food is absorbed in the \_\_\_\_\_.
  - a Stomach
  - b Esophagus
  - c Small Intestine
  - d Large Intestine
  
- 3 Gaseous exchange takes place in which of the following part of the respiratory System?
  - a Alveoli
  - b Pharynx
  - c Larynx
  - d Trachea
  
- 4 Kidney is located between \_\_\_\_\_.
  - a 5th thoracic vertebrae to 3rd lumbar vertebrae
  - b 8th thoracic vertebrae to 12th lumbar vertebrae
  - c 10th thoracic vertebrae to 5th lumbar vertebrae
  - d 12th thoracic vertebrae to 3rd lumbar vertebrae
  
- 5 \_\_\_\_\_ is an example of Exocrine gland.
  - a Sudoriferous
  - b Thymus
  - c Pancreas
  - d Ovaries
  
- 6 \_\_\_\_\_ is the process by which the fetus is expelled from the uterus through the vagina.
  - a Implantation
  - b Parturition
  - c Gestation
  - d Embryogenesis

- 7 Which of these neuroglial cells are star shaped, largest and most numerous having many processes?
- a Oligodendrocytes
  - b Astrocytes
  - c Microglia
  - d Ependymal cells
- 8 \_\_\_\_\_ portion of the stomach opens into the small intestine.
- a Cardiac
  - b Fundic
  - c Pyloric
  - d Body
- 9 \_\_\_\_\_ reduces friction between the membranes in the lungs and thus allow them to slide easily over one another during breathing.
- a Pericardial fluid
  - b Pleural fluid
  - c cerebrospinal fluid
  - d Peritoneal Fluid
- 10 Capillary hydrostatic pressure during filtration is built in the glomerulus as\_\_\_\_\_.
- a size of Bowman's capsule is significantly large
  - b an afferent arteriole is narrow compared to efferent
  - c Bowman's capsule is cup-shaped
  - d an efferent arteriole is narrow compared to afferent
- 11 Which of the following hormones are known as gonadotropins?
- a LH and Oxytocin
  - b LH and vasopressin
  - c LH and FSH
  - d FSH and Oxytocin
- 12 The ducts of the seminal vesicles produce \_\_\_\_\_.
- a Mucus
  - b Testosterone
  - c An alkaline, viscous fluid that contains fructose
  - d Milky, slightly acidic fluid
- 13 \_\_\_\_\_ is a layer of simple epithelium that covers the surface of the ovary.
- a Tunica vaginalis
  - b Tunica albuginea
  - c Germinal epithelium
  - d Serosa

- 14 \_\_\_\_\_ 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
- 15 \_\_\_\_\_ helps in emulsifying fats.
- a Pancreatic Juice
  - b Bile
  - c Salivary Gland
  - d Gastrin
- 16 In which of the following structure, C shaped horizontal rings of hyaline cartilage is observed?
- a Trachea
  - b Lungs
  - c Bronchus
  - d Esophagus
- 17 Fertilization of secondary oocyte occurs in \_\_\_\_\_ of the oviduct.
- a Ampulla
  - b Fimbriae
  - c Isthmus
  - d Infundibulum
- 18 \_\_\_\_\_ hormone increases the flexibility of the pubic symphysis, and dilates cervix during labor.
- a Relaxin
  - b Inhibin
  - c Progesterone
  - d Estrogen
- 19 \_\_\_\_\_ hormone is thought to promote sleepiness.
- a Thymosin
  - b Melatonin
  - c Inhibin
  - d Glucocorticoids
- 20 \_\_\_\_\_ phase of the female reproductive cycle is also known as proliferative phase.
- a Menstrual
  - b Post ovulatory
  - c Pre ovulatory
  - d Ovulation

**Q2. Attempt the following (Any TWO)**

**20M**

- a. Explain the formation, composition, circulation and functions of Cerebrospinal fluid, add a note on spinal meninges.
- b. Draw a neat labeled diagram of the respiratory system. Explain the process of oxygen transport in blood, and factors affecting affinity of Haemoglobin for oxygen.
- c. Draw a neat labeled diagram of pituitary gland. Write a note on anterior pituitary cells and their hormones.

**Q3. Attempt the following (Any SEVEN)**

**35M**

- a. Explain the structure of the reflex arc with a neat labeled diagram.
- b. Describe the structure of a Neuron, and give the classification of neurons.
- c. Elaborate on the role of pancreas in digestion.
- d. Describe in detail the anatomy and structure of the small intestine.
- e. With the help of a neat labeled diagram explain structure and function of alveoli.
- f. Explain in detail blood supply to the kidney.
- g. Write in detail about the renin–angiotensin–aldosterone or RAA pathway.
- h. Enlist the phases of the Female Menstrual Cycle, and explain any two phases with respect to uterine and ovarian changes.
- i. Explain in detail hormonal regulation of the Testes.

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