

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 Which neuroglial cells function as phagocytes in the CNS?
 - a Microglia
 - b Oligodendrocyte
 - c Ependymal cells
 - d Astrocytes

- 2 Each peristaltic wave moves gastric contents from the body of the stomach down into the antrum, by a process known as _____.
 - a Digestion
 - b Propulsion
 - c Retropulsion
 - d Migrating motility complex

- 3 Which of the following is the correct pathway through which air travel in the respiratory system?
 - a Nose, Pharynx, Trachea, Lungs
 - b Nose, Trachea, Lungs, Pharynx,
 - c Trachea, Pharynx, Lungs, Nose
 - d Nose, Trachea, Pharynx, Lungs

- 4 _____ carries out the conversion of angiotensinogen, which is released by the liver, to angiotensin I
 - a Aldosterone
 - b Renin
 - c Calcitriol
 - d Erythropoietin

- 5 _____ is a water soluble amine hormone.
 - a Testosterone
 - b Aldosterone
 - c Epinephrine
 - d Nitric oxide

- 6 _____ hormone produced by the placenta during pregnancy is believed to establish the timing of birth.
 - a Relaxin
 - b Corticotropin-releasing hormone
 - c Human placental lactogen
 - d Progesterone

- 7 _____ is the motor area of the cerebral cortex.
- a Primary auditory area
 - b Wernicke's area
 - c Broca's speech area
 - d Primary gustatory area
- 8 The _____ regulates the movement of food from the pharynx into the esophagus.
- a Pyloric sphincter
 - b Upper esophageal sphincter
 - c Lower esophageal sphincter
 - d Ileocecal sphincter
- 9 The right and left primary bronchi divides into _____.
- a Lobar bronchi
 - b Segmental bronchi
 - c Carina
 - d Terminal bronchioles
- 10 When _____ cells are relaxed, surface area is maximal and glomerular filtration rate is high.
- a Nephron
 - b Mesangial
 - c Detrusor
 - d Juxtaglomerular
- 11 Which of the following is the action of parathormone in the human body?
- a decreases blood sodium level
 - b increases blood sodium level.
 - c decreases blood calcium level
 - d increases blood calcium level
- 12 _____ refers to the external genitals of the female.
- a Mons pubis
 - b Vulva
 - c Perineum
 - d Vestibule
- 13 _____ lines the uterine cavity and sloughs off during menstruation.
- a Perimetrium
 - b Myometrium
 - c Stratum functionalis
 - d Stratum basalis

- 14 _____ is an inhibitory neurotransmitter.
- a GABA
 - b Aspartate
 - c Glutamate
 - d Epinephrine
- 15 Pancreatic juice is drained in _____ part of the small intestine.
- a Duodenum
 - b Ileum
 - c Jejunum
 - d cecum
- 16 _____ performs only respiration functions.
- a Nasopharynx
 - b Oropharynx
 - c Laryngopharynx
 - d Esophagus
- 17 The process of release of sperms from their connections to Sertoli cells, is known as _____.
- a Spermiation
 - b Spermiogenesis
 - c Capacitation
 - d Spermatogenesis
- 18 _____ cells in testes secrete testosterone.
- a Sustentacular
 - b Sertoli
 - c Leydig
 - d Primordial germ
- 19 Glucocorticoids are secreted mainly by _____ cells of adrenal cortex.
- a Chromaffin
 - b Zona glomerulosa
 - c Zona reticularis
 - d Zona fasciculata
- 20 _____ is the site of sperm maturation.
- a Vas deferens
 - b Epididymis
 - c Rete testis
 - d Spermatic cord

Q2. Attempt the following (Any TWO).

20M

- a. Explain in detail the anatomy of the cerebrum and add a note on sensory areas of the cerebrum.
- b. Define pulmonary ventilation, explain in detail inhalation and exhalation and factors affecting pulmonary ventilation.
- c. Describe the structure of adrenal cortex and add a note on Glucocorticoids and its regulation.

Q3. Attempt the following (Any SEVEN).

35 M

- a. Draw a neat labelled diagram of internal anatomy of spinal cord.
- b. Write a note on Diencephalon.
- c. Explain in detail functions of the liver.
- d. Explain the composition and functions of pancreatic juice.
- e. Write a short note on respiratory volume and capacities.
- f. With the help of labelled diagram explain internal anatomy of kidney.
- g. Explain the roles of calcitonin , parathyroid hormone , and calcitriol in calcium homeostasis.
- h. Draw a neat labelled diagram of internal structure of Testes.
- i. Describe the process of oogenesis.
