



**BPharm Semester II – End semester (Make-up) Theory examination  
November 2021**

**PHA-BP20IT, Human Anatomy and Physiology-II**

**Date:** 29-11-2021 **Duration:** - 2:00 to 5:00 pm IST

**Max. Marks:** 75

**Multiple Choice Questions (20Q x 1 =20 marks)**

1. Which of the three spinal meninges is the most superficial?
  - a. Arachnoid mater
  - b. Dura mater
  - c. Menix mater
  - d. Pia mater
2. Surfactant in the alveolar fluid is secreted by
  - a. Type I alveolar cells
  - b. Type II alveolar cells
  - c. Type III alveolar cells
  - d. Type IV alveolar cells
3. Internal respiration is the
  - a. Exchange of gases between air spaces of the lungs and blood in pulmonary capillaries
  - b. Exchange of gases between blood in pulmonary capillaries and tissue cells
  - c. Exchange of gases between blood in systemic capillaries and tissue cells
  - d. Exchange of gases between air spaces of the lungs and blood in systemic capillaries
4. What would be the physiological barrier restricting the passage of drugs for neurodegenerative disorders?
  - a. Blood-Placental barrier
  - b. Blood-Brain barrier
  - c. Plasma membrane barrier
  - d. Intestinal blood barrier
5. During Iodide trapping,
  - a. Thyroid follicular cells passively diffuse iodide ions from cytosol into the blood
  - b. Thyroid follicular cells passively diffuse iodide ions from blood into the cytosol
  - c. Thyroid follicular cells actively transport iodide from cytosol into the blood
  - d. Thyroid follicular cells actively transport iodide from blood into the cytosol
6. Papillae forming mushroom shaped elevations scattered over entire surface of tongue
  - a. Foliate
  - b. Fungiform
  - c. Vallate

- d. Filiform
- 7. This is the site of protein synthesis in a neuron.  
Mitochondria  
Nucleus  
Nissl body  
Dendrite
- 8. Which statement is true regarding insulin?
  - a. Stimulates lipogenesis
  - b. Decreases uptake of amino acids by cells
  - c. Accelerates glycogenolysis
  - d. Reduces conversion of glucose into glycogen
- 9. Located among the glomerular capillaries and in the cleft between afferent and efferent arterioles are \_\_\_\_\_ which regulate glomerular filtration
  - a. Pedicels
  - b. Mesangial cells
  - c. Filtration slits
  - d. Juxtaglomerular cells
- 10. Cells which have receptors for both ADH and aldosterone are
  - a. Mesangial cells
  - b. Juxtaglomerular cells
  - c. Principal cells
  - d. Intercalated cells
- 11. What phenomenon explains why a light touch feels different than a touch applied with more pressure?
  - a. Saltatory conduction
  - b. Continuous conduction
  - c. Frequency of impulses
  - d. Propagation
- 12. Blood calcium level via negative feedback loop directly controls the secretion of
  - a. Calcitriol and parathyroid hormone
  - b. Calcitonin and parathyroid hormone
  - c. Calcitriol and calcitonin
  - d. Calcitriol, Parathyroid hormone and calcitonin
- 13. Which situation is not a stimulus that initiates renin-angiotensin-aldosterone pathway?
  - a. Hemorrhage
  - b. Dehydration
  - c. Rehydration
  - d. Na<sup>+</sup> deficiency
- 14. Which time of the fetal period is the gender distinguishable?
  - a. 5-8 weeks
  - b. 9-12 weeks
  - c. 13-16 weeks
  - d. 1-4 weeks
- 15. Little or no water is reabsorbed in this segment of nephron
  - a. Ascending limb of Loop of Henle
  - b. Descending limb of Loop of Henle
  - c. Distal Convolutated tubule
  - d. Proximal convoluted tubule

16. Glucocorticoids have the following effects, except for
  - a. Suppression of immunity
  - b. Delays wound healing
  - c. Glucose formation
  - d. Lipogenesis
17. This cartilage in the larynx is a landmark for tracheostomy
  - a. Cuneiform
  - b. Corniculate
  - c. Cricoid
  - d. Arytenoid
18. Identify the abnormal constituent in urine
  - a. Sodium ions
  - b. Urea
  - c. Glucose
  - d. Chloride ions
19. Labor cannot occur until the action of \_\_\_\_\_ is diminished
  - a. Estrogen
  - b. Progesterone
  - c. Relaxin
  - d. Inhibin
20. This law tells how the solubility of a gas is related to its diffusion
  - a. Henry's law
  - b. Boyle's law
  - c. Charle's law
  - d. Bohr's law

**Long answers (2Q x 10= 20 marks)**

1. With a neat labelled diagram of eye, explain its anatomy and physiology of vision
2. Discuss the hormonal control of spermatogenesis and elaborate the functions of accessory sex gland secretions

**Short answers (7Q x 5M= 35 marks)**

1. Describe the formation and functions of cerebrospinal fluid. Explain its circulation
2. Explain the types of regulation for glomerular filtration rate
3. Describe the stages of stress response. Is adrenal cortex or medulla more essential for survival? Why?
4. Compare and contrast the structure and functions of sympathetic and parasympathetic nervous systems
5. Elaborate inheritance of sickle cell disease with a Punnett square
6. Discuss the functions of hypothalamus
7. With a neat, labelled sketch describe the histology, hormones and functions of pancreatic islets

**\*\*\*End of question paper\*\*\***