

**First Professional BHMS Degree Supplementary Examinations
November 2024**

Human Physiology and Biochemistry (Hom UG - PB) – Paper II

(2022 Scheme)

Time: 3 Hours**Total marks:100**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

1. Multiple Choice Questions**(10x1=10)**

The Answers to MCQ questions (Q.No. i to Q.No. x) shall be written continuously on the first two writing sheets (ie Page No. 3 & 4) only

- i. Important features of hyperthyroidism is :
 - a) Intolerance to heat
 - b) Anemia
 - c) Somnolence
 - d) Increased body weight
- ii. All the properties of spinal cord reflex except:
 - a) Summation
 - b) Delay
 - c) Fatigue
 - d) Memory
- iii. Gastric juice contains all except:
 - a) Na⁺
 - b) K⁺
 - c) Ca⁺⁺
 - d) Mg⁺⁺
- iv. Corpus luteum is maintained by:
 - a) LH
 - b) Progesterone
 - c) Estrogen
 - d) FSH
- v. Sertoli cells secrete:
 - a) Testosterone
 - b) Estrogen
 - c) Inhibin
 - d) Androstenedione
- vi. The optical power of the eye is:
 - a) 25 diopters
 - b) 50 diopters
 - c) 60 diopters
 - d) 75 diopters
- vii. The taste buds responsible for bitter taste are situated at:
 - a) At the tip of the tongue
 - b) Just behind the tip
 - c) At the sides
 - d) At the posterior aspect
- viii. Reducing sugars are differentiated from non-reducing sugars by:
 - a) Iodine test
 - b) Molisch's test
 - c) Seliwanoff's test
 - d) Benedict's test
- ix. The major fat in adipose tissue is:
 - a) Phospholipids
 - b) Cholesterol
 - c) Sphingolipids
 - d) Triacyl glycerol
- x. Digestive enzymes belong to the class of:
 - a) Hydrolases
 - b) Ligases
 - c) Lysases
 - d) Oxidoreductases

(PTO)

Short Answer Questions**(8x5=40)**

2. Explain synthesis of thyroid hormones.
3. Action of adrenaline and noradrenaline.
4. Explain the connections and functions of limbic system.
5. Describe the physiological changes during sleep.
6. Describe the process of mastication.
7. Explain the factors affecting spermatogenesis.
8. Explain the sensation of taste.
9. Explain different types of carbohydrates.

Long Answer Questions**(5x10=50)**

10. Classify the hormones secreted by adrenal cortex. Explain the actions and regulation of secretion of cortisol. (2+5+3)
11. A 55 year old woman presents in the clinic with complaints of unsteady gait and frequent falls over the past 3 months. She describes difficulty with co-ordination, unable to perform fine motor skills, such as buttoning her shirts or writing.
 - a) What is your diagnosis.
 - b) Which part of the brain is affected
 - c) Write the normal functions of this part (1+1+8)
12. Write in detail about mechanism of salivary secretion.
13. Discuss the role of ovary as an endocrine gland. List the hormones secreted by ovary with its function (3+2+5)
14. Draw a diagram of visual pathway and explain it. (2+8)
