

First Professional BHMS Degree Regular Examination July 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. Pineal gland is the chief source of
 - a) Serotonin
 - b) Brady Kinin
 - c) Melatonin
 - d) Epinephrine
- ii. Which neuroglial cells are connected to the blood vessels
 - a) Astrocyte
 - b) Microglial
 - c) Oligodendrocyte
 - d) Ependymal
- iii. All are stimuli for secretion of parietal cells except
 - a) Gastrin
 - b) Histamine
 - c) Acetylcholine
 - d) Somatostatin
- iv. Embryologically, the male reproductive system developed from
 - a) Wolffian duct
 - b) Mullerian duct
 - c) Prostatic duct
 - d) Ejaculatory duct
- v. Osteoporosis seen after menopause is due to deficiency of
 - a) Progesterone
 - b) FSH
 - c) GnRH
 - d) Estrogen
- vi. The olfactory cortex is present in which part of the brain
 - a) Cerebral cortex
 - b) Limbic cortex
 - c) Cerebellar cortex
 - d) Hypothalamus
- vii. Name the tongue papillae present in the tip of the tongue
 - a) Fungiform papillae
 - b) Filiform papillae
 - c) Vallate papillae
 - d) Foliate papillae

(PTO)

- viii. Which is not a key enzyme of glycolysis
- Hexokinase
 - Pyruvate carboxylase
 - Pyruvate kinase
 - Phosphofructo kinase
- ix. Which is a ketogenic amino acid
- Leucine
 - Lysine
 - Phenylalanine
 - Valine
- x. Which hormone favour the denovo synthesis of fatty acid
- Glucagon
 - Glucocorticoids
 - Growth hormone
 - Insulin

Short Answer Questions

(8x5=40)

- What are thyroid hormones. Briefly write their functions
- Name the pancreatic hormones and their role in blood glucose regulation in brief (1+4)
- What is cerebrospinal fluid and its formation, how is it circulated, and what is its function
- Define synapse. Explain excitatory post synaptic potential (1+4)
- Write the different phases of Pancreatic juice secretion
- Explain the functions of testosterone
- Explain the Visual pathway with a neat diagram
- Beta-oxidation of fatty acids

Long Answer Questions

(5x10=50)

- A 40 year old woman complains of palpitation, heat intolerance, increased sweating, diarrhea and loss of weight, in spite of increased appetite. On examination swelling of neck and exophthalmos were noted. Heart rate was 100/mm and blood pressure 150/70mmhg
 - What endocrine abnormality is responsible for the problems in the patient (1)
 - Explain the formation, secretion and action of this hormone (3+2+4)
- Explain the Corticospinal tract in detail with a suitable diagram
- Describe the composition, functions and regulation of bile (4+3+3)
- Describe the ovarian and uterine changes during menstrual cycle (5+5)
- Explain the mechanism of hearing. Add a note on deafness (7+3)
