

**First Professional BHMS Degree Regular/Supplementary Examinations****March 2025****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**

- Posterior pituitary secretes:
  - Oxytocin
  - Prolactin
  - MSH
  - FSH
- Functions of basal ganglia include:
  - Gross motor function
  - Skilled movements
  - Emotions
  - Maintenance of equilibrium
- Cephalic phase of gastric secretion is caused by:
  - Parasympathetic nerves
  - Sympathetic nerves
  - Gastrin
  - Neurohormones
- Testosterone is mainly produced by:
  - Sertoli cells
  - Leydig cells
  - Seminiferous tubules
  - Epididymis
- In a lady with highly regular 29 day menstrual cycle, ovulation should occur on day:
  - 14
  - 15
  - 17
  - 19
- Medial geniculate body is related with:
  - Vision
  - Hearing
  - Smell
  - Taste
- Medium with highest refractive index in the eye is:
  - Cornea
  - Nucleus of the lens
  - Cortex of the lens
  - Aqueous humour
- Which of the following is an example of epimers:
  - Mannose & glucose
  - Glucose & ribose
  - Galactose & mannose
  - Glucose & galactose
- Which of the following involves carrying genetic information from DNA for protein synthesis:
  - sn-RNA
  - r-RNA
  - m-RNA
  - t-RNA
- Which compounds are responsible for the coordinated regulation of glucose & glycogen metabolism:
  - Fructose 2, 6-biphosphate
  - acetyl co-A
  - NADH
  - NAD<sup>+</sup>

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

- Explain the regulation of hormones from the hypothalamus.
- Explain the secretion of posterior pituitary hormones.
- Classify reflexes and explain the properties of reflex.
- Explain the connection and functions of thalamus.
- Describe the process of absorption in large intestine.
- Explain the role of prolactin hormone.
- Explain the sensation of olfaction.
- Explain the different properties of lipids.

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

- Explain the regulation and action of thyroid hormone.
- A 65 year old man consult doctor with complaints of difficulty in walking and loss of balance while walking. On examination showed incoordinated movements & intension tremor.

- What is your diagnosis (1)
  - Which part of CNS is affected and write about its function & connection. (1+5+2)
  - Which is the neurotransmitter. (1)
- Write in detail about mechanism and regulation of pancreatic juice secretion. (3+7)
  - Explain the fertilization and implantation of ovum. (5+5)
  - Explain the different types of refractive errors.

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