



**All India Institute of Medical Sciences, Kalyani**  
**1<sup>st</sup> Professional MBBS Examination 2021**  
**Physiology (Paper-II)**

**Time: 3 Hrs.**

**Marks: 100**

- Answer all questions and draw well labeled diagrams wherever necessary
- Answer Section A and B is separate answer booklets.
- Write answer in sequence and strike off all blank pages.

**SECTION A (50 Marks)**

1. Describe the synthesis, secretion, and functions of thyroid hormone. Add a note on Grave's disease [7+3=10]
2. Explain mechanism of countercurrent exchange system operating in kidney. [5]
3. Write short note on Tubuloglomerular feedback. [5]
4. Enumerate major hormones released from Adrenal cortex. State clinical features of Cushing's syndrome [1.5+3.5 =5]
5. Explain: [2.5×2=5]
  - i) Functions of corpus luteum.
  - ii) Parathormone in Calcium metabolism
6. Micturition Reflex [5]
7. Uterine changes in different phases of Menstrual cycle [5]
8. List the methods of contraception in females. Briefly explain the mechanism of action of oral contraceptives [3+2=5]
9. Compare and contrast Type I and Type II Diabetes Mellitus [5]

**SECTION B (50 Marks)**

1. Describe pain pathway. Add a note on endogenous pain analgesia system [7+3=10]
2. Draw a well labelled diagram of visual pathway showing visual field defects. [5]
3. List the clinical features of cerebellar lesion [5]
4. Classify aphasia. Add a note on Broca's aphasia. [3+2=5]
5. Explain findings of Rinne's and Weber's tests in a patient suffering from conduction deafness of the right side [5]
6. List the normal waves in electro encephalogram. List the differences between REM and NREM sleep. [2+3=5]
7. A) List the benefits of yogasanas [3+2=5]  
B) Enumerate the nuclei of hypothalamus
8. Inverse stretch reflex [5]
9. Describe the cardiorespiratory changes during exercise [5]