

**RAJIV GANDHI CENTRE FOR DIABETES AND
ENDOCRINOLOGY
FACULTY OF MEDICINE
J.N.M.C.H., A.M.U., ALIGARH**

Syllabus for Ph.D Entrance Test 2020 -21

Section-B

SPECIALITY (ENDOCRINOLOGY)

1. **Neuroendocrinology** : Neural control of glandular secretion, hypothalamo-pituitary unit, circumventricular organs, pineal gland, hypophysiotropic hormones and neuroendocrine axes, neuroendocrine disease.
2. **Anterior Pituitary**: Development anatomy and overview control of hormone secretion, physiology and disorder of pituitary hormone axis.
3. **Posterior Pituitary**: Anatomy synthesis and release of neurohypophyseal hormone, physiology and secretion of vasopressin and thirst, diabetes insipidus and syndrome of inappropriate antidiuretic hormone secretion.
4. **Thyroid Physiology and Diagnostic Evaluation of Thyroid Disorder**: Phylogeny, embryology and ontogeny. Anatomy and history, iodine metabolism, synthesis and secretion of thyroid hormones in peripheral tissue, regulation of thyroid functions, laboratory status of thyroid status.
5. **Adrenal Cortex**: Anatomy, adrenal steroid and steroidogenesis, corticosteroid hormone action, adrenocortical diseases.
6. **Endocrine Hypertension**: Physiology of the sympathoadrenal system, rennin angiotensin aldosterone axis.
7. **The Physiology and Pathology of the Female Reproductive System**: Reproductive Physiology, disorders of the female reproductive system.
8. **Disorder of the Testes and Male Reproductive Tract**: Development of testes, physiology of testicular function, assessment of testicular function, abnormalities of androgen metabolism and testicular function, abnormalities in estrogens metabolism.
9. **Male and Female Sexual Dysfunction**: Regulation of male and female sexual function, management of male and female sexual dysfunction.
10. **Endocrine Changes in Pregnancy**: Placental development, placental adaption to pregnancy, placental hormone production.
11. **Endocrine of Fetal Development**: Fetal Endocrine System.
12. **Disorder of Sexual Differentiation**: Normal sex determination and sex differentiation, disorders of sex differentiation.

13. **Normal and Aberrant Growth:** Normal growth assessment of growth, endocrine regulation of growth.
14. **Puberty:** Ontogeny, Neuroendocrinology, Physiology and disorder.
15. Endocrinology of Aging.
16. **Hormones and Disorders of Mineral Metabolism:** Basic biology of mineral metabolism, Parathyroid and Calcitropic Hormones.
17. **Metabolic Disorders of Lipids, Carbohydrates and Protein and Related Disorder:** Inborn errors of metabolism, structure and function of the skeleton bone remodelling and its regulation.
18. **Diabetes Mellitus:** Epidemiology, diagnostic criteria, pathogenesis, insulin secretion, rodent models of diabetes, biochemistry and molecular cell biology of diabetic complications, physiology of systemic glucoregulation.
19. **Obesity:** Pathogenesis, energy metabolism, adipose tissue as an endocrine organ, adipocyte biology
20. **Immunoendocrinopathy Syndrome.**
21. **Gastrointestinal Hormones.**
22. **Endocrine Responsive Cancers.**
23. **Humoral Manifestation of Malignancy.**