D.M. – ENDOCRINOLOGY

Paper I – BASIC SCIENCES OF ENDOCRINOLOGY

Q. P. Code: 161461

Time: Three Hours Maximum: 100 Marks

Answer ALL questions in the same order.

I. Elaborate on: $(2 \times 15 = 30)$

1. G Protein – coupled receptors and their role in disease pathogenesis.

2. Describe the synthesis and the factors governing the secretion of Arginine Vasopressin (AVP).

II. Write Notes on: $(10 \times 7 = 70)$

- 1. Aberrant ACTH receptors.
- 2. The role of transcription factors in the development of the pancreas.
- 3. The role of Parathyroid related peptide (PTHrP) in health and disease.
- 4. Describe the anatomy of the Hypothalamus.
- 5. Somatostatin receptors.
- 6. Inhibins and Activins.
- 7. The mechanism of insulin resistance.
- 8. Ghrelin and Growth Hormone secretagogues (GHS).
- 9. Genetic syndromes involving pituitary tumors.
- 10. Evaluation of a patient with hypocalcaemia.

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Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(2 \times 15 = 30)$

1. Describe in detail about the terminal metabolism and action of cortisol.

2. Biosynthetic pathway and Metabolism of catecholamines.

II. Write notes on : $(10 \times 7 = 70)$

- 1. Regulation of Expression of genes encoding polypeptide hormones.
- 2. Ligand dependent gene activation.
- 3. Brown adipose tissue and Biege adipose tissue.
- 4. Mechanisms in thyroid dyshormono genesis.
- 5. Dominant negative inhibition.
- 6. Diencephalic syndrome.
- 7. Gene mutations for Beta cell function and diabetes.
- 8. Genetics of turner's syndrome.
- 9. SOX gene regulation of gonadal phenotype.
- 10. Phosphate metabolism.
