

**2020**

**PHYSIOLOGY — HONOURS**

**Paper : CC-12**

**Full Marks : 50**

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words  
as far as practicable.*

1. Answer **any five** questions from the following : 2×5
- (a) What do you mean by short-loop feedback inhibition? Give one example.
  - (b) What do you mean by pseudohypoparathyroidism?
  - (c) Name the enzymes involved in conversion of serotonin to melatonin.
  - (d) What is Wolff–Chaikoff effect?
  - (e) Name the different zones of adrenal gland.
  - (f) State two characteristic features of gastrointestinal endocrine cells.
  - (g) Differentiate between acromegaly and gigantism.
  - (h) What are somatomedins?
2. Answer **any two** questions from the following : 5×2
- (a) Discuss the characteristics of any one steroid hormone mentioning its synthesis, location of receptor and cellular response.
  - (b) Mention the diseases developed in hypo and hyperactive state of adrenal gland.
  - (c) Describe the role of ADH in osmoregulation.
  - (d) Describe the endocrine function of heart.
  - (e) What do you mean by primary and secondary aldosteronism?
3. Answer **any three** questions from the following :
- (a) Describe the steps of thyroid hormone biosynthesis with diagram. Briefly describe the peripheral transport of thyroid hormone. What is the physiological significance of peripheral conversion of thyroxine to triiodothyronine? (4+2)+2+2
  - (b) Describe the hormonal regulation of calcium and phosphorus homeostasis. 10
  - (c) Describe the endocrine regulation of glucose homeostasis. State one function of each— somatostatin and pancreatic polypeptide. 8+(1+1)
  - (d) Describe the function and regulation of aldosterone. How the secretion of adrenal medullary hormones is regulated? Name the diseases related to adrenal hypofunctions. 2+3+3+2
  - (e) Describe the functions of— gastrin, CCK-PZ and VIP. 4+4+2
-