

2023

PHYSIOLOGY — HONOURS

Paper : CC-12

(Endocrinology)

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.*

Group - A

1. Answer *any five* questions from the following : 2×5
- (a) Why ADH and oxytocin are called neurohormones?
 - (b) What is Wolf-Chaikoff effect?
 - (c) What do you mean by atrial natriuretic peptide?
 - (d) What are APUD cells?
 - (e) What is hyperinsulinism?
 - (f) What is the importance of parafollicular cells?
 - (g) Write the function of motilin and cholecystokinin.
 - (h) State the difference between magnocellular and parvocellular neurosecretory cells.

Group - B

2. Answer *any two* questions from the following : 5×2
- (a) Describe the effect of hypoglycemia on GH and IGF-1 secretion.
 - (b) How does epinephrine influence metabolic pathways in liver and adipose tissue?
 - (c) "T3 is more potent than T4."– Justify the statement with reasons.
 - (d) Write a short note on POMC.
 - (e) Describe the hypothalamo-hypophyseal-adrenal axis with a labelled diagram.

Group - C

3. Answer *any three* questions from the following :

- (a) (i) State briefly the biosynthesis of melatonin.
 - (ii) How the secretion of melatonin is regulated?
 - (iii) Describe the histological structure of pineal gland with labelled diagram. 3+4+3
 - (b) (i) Discuss the role of thyroid hormones on growth and metabolism.
 - (ii) Describe the fate of adrenal medullary hormones in the body. (3+3)+4
 - (c) (i) How is the secretion of glucagon regulated?
 - (ii) Discuss the pathophysiology of type I and type II diabetes.
 - (iii) What do you mean by diabetic ketoacidosis? 3+5+2
 - (d) (i) State the functions of gastrin.
 - (ii) How is the secretion of gastrin regulated?
 - (iii) Why the term 'gastro-intestinal hormone' is misnomer?
 - (iv) State two important functions of ghrelin. 3+3+2+2
 - (e) (i) Describe the role of aldosterone in mineral metabolism.
 - (ii) How the secretion of prolactin hormone is regulated?
 - (iii) What is tubulo infundibular dopaminergic (TIDA) system? 5+3+2
 - (f) (i) State the functions of neurohormones.
 - (ii) Describe the histological structure of anterior pituitary gland with labelled diagram.
 - (iii) Compare acromegaly and gigantism. 5+3+2
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