

2016

M.Sc.

4th Semester Examination

BIOCHEMISTRY

PAPER—BIC-401

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

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

Illustrate the answers wherever necessary.

Answer all questions.

Group — A

1. Answer any *five* questions from the following : 5×2
 - (a) What are the functions of hypothalamic hypophyseal portal system ?
 - (b) What is Wilson's disease ?
 - (c) Why does excess intake of fat soluble vitamins cause disorder in human ?
 - (d) What is metabolic disorder ?
 - (e) What is resting membrane potential ?
 - (f) What do you mean by lysosomal storage disease ?
 - (g) What is Maple syrup urine disease ?
 - (h) State the functions of ACTH.

(Turn Over)

Group — B

Answer any *two* questions from the following : 2×5

2. How does glucagon exert its effects on cellular metabolism? 5
3. Discuss about the disorders related to iron overload and deficiencies. $2\frac{1}{2} + 2\frac{1}{2}$
4. Name the hormones secreted from Posterior and intermediate lobe of Pituitary gland mentioning their target organs and metabolic functions. 2+1+2
5. Follicle stimulating hormone (FSH) causes estrogen release and in return estrogen inhibit FSH' — Explain. 5

Group — C

Answer any *two* questions from the following : 2×10

6. Briefly discuss the absorption, transport, storage and biochemical functions of vitamin A. State the deficiency symptoms of thiamine and biotin. 8+2
7. Briefly discuss the role of different placental hormones, which support pregnancy. Discuss the disorders related to the hormones secreted from adrenal Cortex. 5+5
8. Describe how sex-dimorphism is related to vitamin metabolism. Why selenium is considered as an essential micronutrients in mammals? 5+5
9. How does Kidney help to maintain blood pH? What is syndrome of inappropriate secretion of antidiuretic hormone (ADH)? 8+2