

G-4/403(A)/21

Roll No.....

M.Sc. IV Semester Examination, 2021

BIOCHEMISTRY

Paper III

(Clinical Biochemistry and Endocrinology)

Time : 3 Hours]

[Maximum Marks : 80

Note : All questions are compulsory. Question Paper comprises of 3 sections. **Section A** is objective type/multiple choice questions with no internal choice. **Section B** is short answer type with internal choice. **Section C** is long answer type with internal choice.

SECTION 'A'

(Objective Type/ Multiple Choice Questions)

Choose the correct answer :

1 × 8 = 8

1. Bence Jones proteins are :

- (a) Monoclonal light chains
- (b) Monoclonal heavy chains
- (c) Intact Y-globulins
- (d) All of the above

P.T.O.

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2. Mutation present in Sickle Cell Anaemia is :

- (a) beta 6 Glu Val (b) beta 6 Glu Lys
- (c) beta 26 Glu Val (d) beta 26 Glu Lys

3. Inulin clearance is used to assess :

- (a) Renal threshold
- (b) concentrating ability of tubules
- (c) GFR
- (d) diluting ability of tubules

4. Absence of Urobilinogen in urine occurs in :

- (a) Hemolytic Jaundice
- (b) Obstructive Jaundice
- (c) Hepatic Jaundice (d) All of the above

5. Hyperglycemic hormone secreted by pancreas :

- (a) Insulin (b) Glucagon
- (c) Epinephrine (d) Growth hormone

6. Which of the following hormone is not secreted by Thyroid Gland :

- (a) Thyroxine (b) Calcitonin
- (c) Tri-iodo thyronine
- (d) Calcitriol

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7. Melatonin derived from :
- (a) Tryptophan (b) Tyrosine
- (c) Methionine (d) Alanine
8. All of the following are steroid Hormone except :
- (a) Progesterone (b) Estrogen
- (c) Cortisol (d) Oxytocin

SECTION 'B'

4 × 6 = 24

(Short Answer Type Questions)

Note : Write short answer on the following questions (any four) :

1. Malabsorption Syndrome.
2. Blood Glucose Regulation.
3. CSF analysis.
4. Oral Contraceptive Pills.
5. Thyroid Function test.
6. Cardiac biomarkers.

SECTION 'C'

4 × 12 = 48

(Long Answer Type Questions)

Note : Write Long Essay on the following questions (any four) :

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1. Describe Haemoglobin Metabolism under following headings :

(a) Describe Heme synthesis and degradation.

(b) Types of Jaundice and clinical findings.
2. Describe Insulin Synthesis and Insulin structure in detail.
3. Give detail about Immunoglobulin structure and function. Briefly discuss disorders of Immunoglobulin.
4. Discuss Regulation of Acid-Base Balance along with disorders of Acid-Base Balance.
5. How the free radicals are generated in our body ? Discuss the roles of endogenous and exogenous antioxidants in combating oxidative stress.
6. Describe Gonadal Hormone in detail with their metabolic role.

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