

APRIL 1999

[SG 1402]

BACHELOR OF NATUROPATHY AND YOGIC
SCIENCES (BNYS) DEGREE EXAMINATION.

First Year

Paper II — HUMAN PHYSIOLOGY AND
BIOCHEMISTRY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

Answer Sections A and B in separate answer books.

SECTION A

(PHYSIOLOGY)

1. Answer any TWO of the following : (30)

(a) Describe the different types of muscles their distribution and mechanism of contraction of skeletal muscle.

(b) What is the normal blood sugar level and describe how the hormones regulate the blood sugar level.

(c) Classify Leucocytes and describe their function.

2. Write brief notes on any FOUR : (4 × 5 = 20)

- (a) Blood group
- (b) Cerebral cortex
- (c) Haemoglobin
- (d) Hypoxia
- (e) Menstrual cycle
- (f) Taste Buds.

SECTION B

(BIOCHEMISTRY)

3. Answer any TWO of the following : (30)

- (a) Classify proteins giving examples.
- (b) Describe how iron is absorbed from the intestines and utilized in the body.
- (c) Describe the TCA cycle in detail.

4. Write brief notes on any FOUR : (4 × 5 = 20)

- (a) Water soluble vitamins
- (b) Lipoproteins
- (c) Nyctopia
- (d) Thyroxin
- (e) Serum Calcium

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First Year

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BIOCHEMISTRY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

Answer Sections A and B in separate answer books.

SECTION A
(PHYSIOLOGY)

Answer in detail any TWO of the following : (30)

(a) Describe the Cardiovascular and Respiratory changes during moderate Muscular Exercise.

(b) Draw and label the functional areas over the lateral surface of cerebral hemisphere and explain briefly functions of Cerebral Cortex.

(c) Describe the hormones that influence the blood sugar level in Man.

2. Write briefly on any FOUR : (4 × 5 = 20)

(a) Adrenocorticotrophic hormone

(b) Factors that maintain circulation of blood

(c) Classification of nerve fibres.

(d) Periodic breathing.

(e) Cyanosis.

(f) Structure and functions of Ovary.

SECTION B

(BIO-CHEMISTRY)

3. Write an Essay on any ONE of the following : (20)

(a) What is the normal Blood Sugar Level? Describe the mechanisms and factors that regulate Blood Sugar Level.

Add a note on insulin deficiency.

Or

(b) Describe the sources, requirements, chemistry, biochemical functions and deficiency manifestations of Vitamin C.

4. Write briefly on any SIX : (6 × 5 = 30)

(a) Biological Value of Proteins.

(b) Liver Function Tests.

(c) Chromatography.

(d) Glucose Tolerance Test (G.T.T.).

(e) Essential Fatty Acids.

(f) Plasma Proteins.

(g) Glycogen Storage Diseases.

(h) Glucagon

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BACHELOR OF NATUROPATHY AND YOGIC
SCIENCES (BNYS) DEGREE EXAMINATION.

First Year

Part I

(Old Regulations)

Paper II — HUMAN PHYSIOLOGY AND
BIOCHEMISTRY

Time : Three hours . Maximum : 100 marks

Answer Sections A and B in separate Answer books.

SECTION A
(PHYSIOLOGY)

1. Answer any TWO of the following : (30)

(a) Structure of cerebellum and role of cerebellum
in maintenance of posture and equilibrium.

(b) Growth hormone and its functions.

(c) Draw the parts of Respiratory system and
describe the mechanism of Regulation of Respiration.

2. Write notes on any FOUR : (4 × 5 = 20)

(a) Reflex arc

(b) Eosinophils

(c) Paraplegia

(d) Vital capacity

(e) Micturition reflexes

(f) Platelets.

SECTION B
(BIOCHEMISTRY)

Answer any TWO of the following.

3. (a) How are enzymes classified? Give atleast
three examples of each. (30)

(b) Outline the chemistry, sources, daily
requirement and function, deficiency manifestations of
Vit. A.

(c) Give a brief account of the Biological functions
of Insulin.

4. Write notes on any FOUR of the following :
(4 × 5 = 20)

(a) Paper Chromatography

(b) Urea cycle

(c) Serum calcium

(d) Absorption of lipids

(e) Difference between monosaccharide and
disaccharide.

OCTOBER 2000

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**BACHELOR OF NATUROPATHY AND YOGIC
SCIENCES (B.N.Y.S.) DEGREE EXAMINATION.**

(Old Regulations)

First Year

Part I

**Paper II — HUMAN PHYSIOLOGY AND
BIOCHEMISTRY**

Time : Three hours

Maximum : 100 marks

Answer Sections A and B in separate answer books.

SECTION A

(PHYSIOLOGY)

1. Answer in detail any TWO of the following :
(2 × 15 = 30)
 - (a) Trace the pathways for touch sensation. Add a note on hyperaesthesia and anaesthesia.
 - (b) Define cardiac cycle. Describe the phases of ventricular filling and their significance
 - (c) Name the hormones of anterior pituitary gland. Explain the actions of growth hormone.

OCTOBER 2000

2. Write briefly on any FOUR : (4 × 5 = 20)

- (a) Structure and functions of Leucocytes
- (b) Functions of hypothalamus
- (c) Differences between skeletal and smooth muscles
- (d) Blood grouping
- (e) Composition and functions of saliva
- (f) Surfactant
- (g) Haemolysis
- (h) Ovulation time.

SECTION B

(BIOCHEMISTRY)

3. Write an essay on any ONE of the following : (20)

(a) Name the active form of Vitamin D. How is it synthesized in the body? Add a note on its functions, requirements and deficiency manifestations.

(b) Give the classification of Enzymes. Mention the enzymes of clinical importance.

4. Write briefly on any SIX : (6 × 5 = 30)

- (a) Renal glycosuria
 - (b) Serotonin
 - (c) Trace elements
 - (d) Basal metabolic rate (BMR)
 - (e) Abnormal haemoglobins
 - (f) Coenzymes
 - (g) Electrophoresis
 - (h) Structure of proteins.
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