5/934 **0123E564** Candidate's Seat No : 327

First Year B. Physiotherapy Examination

Human Physiology and Biochemistry

Date : 12-01-2023, Thursday] **[Max. Marks : 80**

Time : 3 Hours]

Instructions : (1) Answer to the point.
(2) Figure to the right indicate marks.
(3) Write legibly.
(4) Draw diagrams wherever necessary.
(5) Use separate answer books for each section.

SECTION-I

Q-1. Describe the origin and course of pyramidal tracts. and Give difference between upper motor neuron lesion and lower motor neuron lesion. (16)

OR

Q- 1. Name the hormones secreted by anterior pituitary gland .Describe the actions of the Growth hormone and Effects of abnormal secretion of Growth hormone.

Q-2. Classify the transport mechanisms across the cell membrane ,Describe in detail of primary active transport mechanism. (16)

OR

Q-2 . Describe the events occurs during cardiac cycle and pressure changes occurring in left ventricle during cardiac cycle.

Q-3. **write short Notes on (any three)** (12)

(a) Composition and functions of Gastric Juice
(b) RH factor
(c) Spermatogenesis
(d) REM sleep

Q.4 **write short notes on (any three)** (12)

(a) Refractive errors of Eye
(b) Sarcomere
(c) Hypoxia
(d) Juxtaglomerular apparatus

Section II

Q.5 Define and classify enzymes. Mention factors affecting enzyme activity (16)

OR

Q.5 Define and classify Carbohydrates. Describe Glycolysis with energetics in aerobic and anaerobic conditions. (16)

Q.6 Write short notes on (Any Two) (08)

(A) Vitamin A functions and deficiency symptoms
(B) RNA and its types with structure and function
(C) Urea Cycle

0723E220

Candidate's Seat No : _____

First Year B. Physiotherapy Examination

Human Physiology and Biochemistry

Date : 05-07-2023, Wednesday] **[Max. Marks : 80**

Time : 3 Hours]

Instructions : (1) Answer to the point.
(2) Figure to the right indicates marks.
(3) Draw diagrams wherever necessary.
(4) Write legibly.
(5) Use separate answer books for each section.

Section: 1 (56 Marks)

Q.1 Describe Various Methods of Transport across Cell Membrane **(16)**

OR

Q.1 Describe Sarcotubular System and Molecular Mechanism of Muscle Contraction

Q.2 Describe Pacemaker Potential and Various Stages of Cardiac Cycle **(16)**

OR

Q.2 Describe Composition, Mechanism of Secretion, Functions & Regulation of Gastric Secretion

Q.3 Write Short Notes on (Any THREE) **(12)**
a) Neuromuscular Transmission
b) Nervous Regulation of Respiration
c) Oxygen Transport
d) Functions of RBCs, WBCs, Platelets & Plasma Proteins

Q.4 Write Short Notes on (Any THREE) **(12)**
a) Pyramidal Tract
b) Functions of Basal Ganglia & Cerebellum
c) Micturition Reflex
d) Properties of Skeletal Muscle

SECTION-I1 Marks-24

Q.5. Long Essay (Answer any One) 1X 16 = 16

A. Structure and function of DNA.

OR

B. Liver Function Test (LFT)

Q.6. Short Essay (Any Two) 2 X 4 = 08

A. GOUT

B. Plasma Proteins

C. Jaundice

1/913 **1223E533** Candidate's Seat No : 735

First Year B. Physiotherapy Examination

Human Physiology and Biochemistry

Date : 18-12-2023, Monday] **[Max. Marks : 80**

Time : 3 Hours]

Instructions : (1) Answer to the point.
(2) Figure to the right indicate marks.
(3) Write legibly.
(4) Draw diagrams wherever necessary.
(5) Use separate answer books for each section.

Section I(56 Marks)

Q.1 Define hemostasis, and differentiate between primary, secondary, and tertiary hemostasis. Describe intrinsic and extrinsic mechanisms of coagulation. 16 Marks

OR

Q.1 Classify immunity. Describe the role and mechanism of innate, acquired, humoral, and cellular immunity.

Q.2 Describe hormones secreted by the Adrenal gland. Enumerate the action of glucocorticoids and describe the mechanism that regulates glucocorticoid secretion. 16 Marks

OR

Q.2 Define blood pressure. Describe short and long-term regulation of blood pressure.

Q.3 Write short notes on (Any three) 12 Marks

a) Myasthenia Gravis
b) G protein
c) Sodium-potassium pump
d) Hypoxia

Q.4 Write short notes on (Any three) 12 Marks

a) Sliding filament mechanism of skeletal muscle contraction
b) Synapse
c) Juxtaglomerular apparatus
d) Aphasia

SECTION - II (24 Marks)

Q-5 Descibe the chemistry, biochemical functions, daily requirements, sources & deficiency manifestations of vitamin C. (16)

OR

Q-5 Describe the structure & functions of mucopolysaccharides. (16)

Q-6 Write short notes.(Any two) (08)

(A) Isoenzymes
(B) Fatty liver
(C) Transmethylation