

**SUPPLEMENTARY
BACHELOR OF PHYSIOTHERAPY
First Year : SUMMER : 2023
SUBJECT : HUMAN ANATOMY**

Day : Monday
Date : 4/9/2023

S-25044-2023

Time : 01:00 PM-04:00 PM
Max. Marks : 80

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Use **blue / black** pen only
- 4) Draw neat and labelled diagram **WHEREVER** necessary.
- 5) Do not write anything on the blank portion of the question paper. This will be considered an unfair means
- 6) Section - **A** and Section - **B** should be written in **SEPARATE** answer sheets.

SECTION - A

- Q.1** Long answer questions (Solve any **TWO** out of **THREE**) **(20)**
- A)** Describe femoral triangle under - **(4+4+2)**
- i)** Boundaries
 - ii)** Contents
 - iii)** Applied anatomy
- B)** Describe shoulder joint under - **(1+1+2+4+2)**
- i)** Participating bones and articular surfaces
 - ii)** Classification of the joint
 - iii)** Relations
 - iv)** Movements and muscles causing movements
 - v)** Applied anatomy
- C)** Describe Gluteus Maximus muscle under **(3+2+3+2)**
- i)** Origin, insertion & nerve supply
 - ii)** Actions of the muscle
 - iii)** Structures under cover of the muscle
 - iv)** Applied anatomy
- Q.2** Write short notes (Solve any **FOUR** out of **FIVE**) **(20)**
- a)** Blood Supply of long bone
 - b)** Axillary nerve
 - c)** Relations of stomach
 - d)** Popliteal Fossa
 - e)** Hamstring muscles

P.T.O.

SUPPLEMENTARY
BACHELOR OF PHYSIOTHERAPY
First Year : SUMMER : 2023
SUBJECT : HUMAN PHYSIOLOGY

Day : Tuesday

Date : 5/9/2023

S-25045-2023

Time : 01:00 PM-04:00 PM

Max. Marks : 80

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Section A and Section B should be written on **SEPARATE** answer sheets.
- 3) Draw neat and clean diagrams **WHEREVER** necessary.
- 4) Figures to the right indicate **FULL** marks.

Section A

Q.1 Long Answer Questions (Attempt Any Two): (2 x 10 = 20)

- a) Enlist various mechanisms for regulation of arterial blood pressure. Describe short term mechanisms in detail. (3+7)
- b) Discuss in details transport of Oxygen from lungs to tissues. Add a note on hypoxia. (7+3)
- c) Define cardiac cycle. Enlist atrial and ventricular events in cardiac cycle. Elaborate in detail various phases in ventricular systole. (1+3+6)

Q.2 Short Essay Questions (Attempt Any Four): (4 x 5 = 20)

- a) Composition and functions of gastric juice.
- b) Peculiarities of coronary circulation.
- c) Muscles of respiration.
- d) Physiological actions of progesterone.
- e) Physiological actions of parathyroid hormone.

Section B

Q.3 Long Answer Questions (attempt Any Two): (2 x 10 = 20)

- a) Describe molecular basis of skeletal muscle contraction. Add a note on sarcotubular system. (7+3)
- b) Enlist various descending tracts in spinal cord. Describe origin, course and termination of pyramidal tracts. Enumerate their functions. (2+6+2)
- c) Enumerate various functions of hypothalamus. Describe any four functions in detail. (4+6)

Q.4 Short Essay Questions (Attempt Any Four): (4 x 5 = 20)

- a) Functions of middle ear.
- b) Homeostasis and its mechanisms.
- c) ABO and Rh blood group systems.
- d) Glomerular filtration rate.
- e) Functions of frontal lobe.

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**SUPPLEMENTARY
BACHELOR OF PHYSIOTHERAPY
First Year : SUMMER : 2023
SUBJECT : BIOCHEMISTRY**

Day : Wednesday

Date : 6/9/2023

S-25046-2023

Time : 01:00 PM-03:00 PM

Max. Marks : 40

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate **FULL** marks.
- 3) Draw neat diagrams **WHEREVER** necessary.
- 4) Both the sections should be written in **SEPARATE** answer book.

SECTION A

- Q.1** Short Answer Questions (Attempt **ANY FOUR**) **(4X5=20)**
- a) TCA cycle : Important steps of pathway with energetics.
 - b) Enzymes : Diagnostic and therapeutic applications.
 - c) Jaundice : Definition, types, laboratory findings.
 - d) Lipoproteins : Classification and functions.
 - e) HMP shunt: Important steps and significance.

SECTION B

- Q.2** Short Answer Questions (Attempt **ANY FOUR**) **(4X5=20)**
- a) Mechanism and biochemical events of muscle contraction.
 - b) Describe Urea Cycle with significance of blood urea.
 - c) BMR (Basal Metabolic Rate) : Definition, Factors affecting
 - d) Vitamin A: Sources, Biochemical functions, RDA, deficiency manifestations.
 - e) ELISA : Principle, working and applications.

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SUPPLEMENTARY
BACHELOR OF PHYSIOTHERAPY
First Year : SUMMER : 2023
SUBJECT : FUNDAMENTALS OF ELECTROTHERAPY

Day : Friday

Date : 8/9/2023

S-25048-2023

Time : 01:00 PM-04:00 PM

Max. Marks : 80

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate **FULL** marks.
- 3) Draw neat diagram **WHEREVER** necessary.
- 4) Both the sections should be written in **SEPARATE** answerbook.

SECTION - A

- Q.1** Long Answer questions (Attempt **ANY TWO**) : (20)
- a) Define Cryotherapy. Explain various methods of application of Cryotherapy. Add a note on super cooling effect. (1+7+2)
 - b) Describe the construction of Hydrocollator Unit. Write the therapeutic and physiological effects of Superficial Heating Agents. (2+8)
 - c) Explain various methods of modes of heat transfer. Explain physiological and therapeutic effects of heat therapy. Enlist the superficial heating agents. (3+5+2)
- Q.2** Short Essay Questions (Write **ANY FOUR**) : (20)
- a) Earthing and its importance
 - b) Functions of a Transformer
 - c) Rheostat
 - d) Electromagnetic spectrum
 - e) Write down the methods to reduce electrical skin resistance.

SECTION - B

- Q.3** Long Answer questions (Attempt **ANY TWO**) : (20)
- a) Describe types of electrodes used for low frequency currents. Discuss the production of faradic current and importance of surging. (4+6)
 - b) Write in detail the construction of infra-red lamps and explain therapeutic effects of the same. (5+5)
 - c) Describe in detail with a panel diagram the production of ultra-sound waves. Add a note on testing of ultrasound apparatus. (7+3)
- Q.4** Short Essay Questions (Write **ANY FOUR**) : (20)
- a) State laws governing radiation.
 - b) Types of TENS with parameters
 - c) Any two home remedies for superficial thermal agents
 - d) Thermionic valve
 - e) Measures to prevent electric shock in physiotherapy Department
