

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

Day : Monday

Date : 17-07-2023

Time : 02:00 PM-05:00 PM

S-25044-2023

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 (Solve **ANY TWO** out of **THREE**) : **(20)**
- A)** Describe Temporo mandibular joint under--- (1+1+3+5)
- i) Bones forming joint
  - ii) Classification
  - iii) Ligaments
  - iv) Movements and muscles producing movement
- B)** Describe Cubital fossa under--- (4+4+2)
- i) Boundaries
  - ii) Contents
  - iii) Applied anatomy
- C)** Describe gluteus Maximus muscle under--- (4+2+4)
- i) Origin, insertion, nerve supply
  - ii) Actions
  - iii) Structures under cover of the muscle
- Q.2** Write short notes (Solve **ANY FOUR** out of **FIVE**) : **(20)**
- a) Blood supply of long bone
  - b) Histology of skeletal muscle
  - c) Supports of uterus
  - d) Biceps brachii muscle
  - e) Hamstring muscles

**SECTION - B**

- Q.3** Long Answer questions (Solve **ANY TWO** out of **THREE**) : **(20)**
- A)** Describe Supero-lateral surface of brain, add a note on circle of Willis. (7+3)
- B)** Describe spinal cord under --- (3+2+2+3)
- i) Transverse section
  - ii) Spinal nerves
  - iii) Blood supply
  - iv) Applied anatomy
- C)** Describe extracranial course of facial / VII<sup>th</sup> cranial-nerve under --- (7+3)
- i) Branches, distribution
  - ii) Applied anatomy
- Q.4** Write short notes (Solve **ANY FOUR** out of **FIVE**) : **(20)**
- a) Rectus abdominis muscle
  - b) Femoral artery
  - c) Blood supply of stomach
  - d) Sterno-cleido-mastoid muscle
  - e) Differences between right and left lung

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

Day : Wednesday

Time : 02:00 PM-05:00 PM

Date : 19-07-2023

**S-25045-2023**

Max. Marks : 80

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**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.
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**SECTION - A**

**Q.1** Long Answer questions (Attempt **ANY TWO**) : (20)

- a) Explain the structure of sarcomere. Add a note on red and pale fibers. (6+4)
- b) Describe transport of oxygen from lungs to tissues. Add a note on hypoxia mentioning its types and effects on various systems of body. (6+4)
- c) Define blood pressure. Enumerate various regulatory mechanisms of blood pressure. Explain the long term regulation mechanism in detail. (1+3+6)

**Q.2** Short Essay Questions (Write **ANY FOUR**) : (20)

- a) Respiratory changes during moderate exercise
- b) Ovarian changes in menstrual cycle
- c) Functions of gastric juice
- d) Errors of refraction
- e) Functions of proximal convoluted tubule

**SECTION - B**

**Q.3** Long Answer questions (Attempt **ANY TWO**) : (20)

- a) Define synapse. Explain the steps of transmission of impulse. Enumerate any three properties of synapse. (1+6+3)
- b) Draw a diagram of pyramidal tract. Describe origin, course and its termination. (4+6)
- c) Enlist various functions of hypothalamus. Describe any four functions in detail. (4+6)

**Q.4** Short Essay Questions (Write **ANY FOUR**) : (20)

- a) Action potential in large myelinated nerve fiber
- b) Sodium potassium pump
- c) Myasthenia gravis
- d) Functions of white blood cells
- e) Gigantism

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

Day : Friday

Time : 02:00 PM-04:00 PM

Date : 21-07-2023

**S-25046-2023**

Max. Marks : 40

**N.B.:**

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

**SECTION-A**

**Q.1** Short Answer Questions: (Attempt any **FOUR**)

(4×5=20)

- a) Tricarboxylic Acid (TCA) cycle.
- b) Phospholipids: Classification and functions.
- c) Competitive inhibition of enzymes.
- d) Jaundice: Definition, types, causes and laboratory findings.
- e) Protein Energy Malnutrition.

**SECTION-B**

**Q.2** Short Answer Questions: (Attempt any **FOUR**)

(4×5=20)

- a) Urea cycle.
- b) Lipid profile.
- c) Vitamin C: Sources, functions and deficiency manifestations.
- d) Calcium: Sources, functions and disorders.
- e) Colorimetry: Principle, working and applications.

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**BACHELOR OF PHYSIOTHERAPY**  
**First Year :SUMMER : 2023**  
**SUBJECT : FUNDAMENTALS OF KINESIOLOGY & KINESIOTHERAPY**

Day : Monday

Time : 02:00 PM-~~5~~5:00 PM

Date : 24-07-2023

S-25047-2023

Max. Marks : 80

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**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.
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**SECTION - A**

**Q.1** Long Answer questions (Attempt **ANY TWO**) : (20)

- a) Define axes and planes. Describe cardinal planes and axes with example. (2+8)
- b) Explain sitting as a fundamental position with muscle work and its uses.
- c) Explain definition, uses, and indications of suspension therapy. Write in detail about pendular suspension. (6+4)

**Q.2** Short Essay Questions (Write **ANY FOUR**) : (20)

- a) Describe superficial sensations.
- b) Explain gravity in relation to BOS and COG.
- c) Write therapeutic and physiological effects of passive movements.
- d) Describe kneading technique in massage with effects and uses.
- e) Explain benefits of group exercises.

**SECTION - B**

**Q.3** Long Answer questions (Attempt **ANY TWO**) : (20)

- a) Define relaxation. Explain local relaxation technique with its effect and uses. (2+8)
- b) Define Goniometry. Explain about documentation in Goniometry. (2+8)
- c) Explain Trikonasana in detail with indications, contraindications and its uses.

**Q.4** Short Essay Questions (Write **ANY FOUR**) : (20)

- a) Write classification of active movements.
- b) Write indications and contraindications of hydrotherapy.
- c) Write a note on finger ladder.
- d) Describe law of inertia with example.
- e) Write a note on third order lever with example.

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

Day : Wednesday

Time : 02:00 PM-05:00 PM

Date : 26-07-2023

S-25048-2023

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) Describe the construction of Hydrocollator Unit and Hydrocollator Pack. Write about indications and contraindications of Superficial Heating Agents. (4+6)
- b) Define Cryotherapy. Write down the Physiological and therapeutic effects of cryotherapy. Add a note on various methods of applications of cryotherapy. (1+5+4)
- c) Explain in detail about physiological and therapeutic effects of Paraffin wax bath. Describe various methods of application of Paraffin wax bath. Add a note on its contraindications. (3+5+2)

**Q.2** Short Essay Questions (Write **ANY FOUR**) : (20)

- a) Construction of Non luminous Infra-red lamp
- b) Define TENS. Draw neat and label panel diagram of TENS.
- c) Charging and discharging of a condenser
- d) State ohms law, and write about resistances in series and parallel.
- e) Principle of production of Interferential therapy currents.

**SECTION - B**

**Q.3** Long Answer questions (Attempt **ANY TWO**) : (20)

- a) Explain with a labelled diagram the production of high pressure mercury vapour lamp. Add a note on tridymite formation. (7+3)
- b) Describe production of short wave diathermy, add a note on testing of SWD apparatus. (5+5)
- c) Describe different types of electrodes used in low frequency currents. Discuss different wave forms of interrupted direct current. Add a note on multi-stimulator. (4+4+2)

**Q.4** Short Essay Questions (Write **ANY FOUR**) : (20)

- a) Piezoelectric effect
- b) Fuse
- c) Define Electrical shock and write its types.
- d) Define laser and write properties of laser.
- e) Laws governing radiation

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