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[5 × 7 = 35]

2. Short answer question (any five out of six) :

- a) Oxygen debt.
- b) Respiratory adaptations to exercise.
- c) Strength duration curve.
- d) Renin angiotensin system.
- e) Oxygen - Hb dissociation curve.
- f) Lead II ECG

**SECTION - "B" LAQ (30 Marks)**

3. Long answer question (any one out of two) :

[1 × 15 = 15]

- a) Describe sarcotubular system. What is excitation - contraction coupling?
- b) Describe properties of skeletal muscle fiber.

4. Long answer question (any one out of two) :

[1 × 15 = 15]

- a) Describe lateral spinothalamic tract.
- b) Describe synaptic transmission in CNS. Enumerate properties of synapse.



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First BPTH (2012) Examination, Summer  
(Phase - III All Other Remaining UG/PG Courses - 2020)  
HUMAN ANATOMY - I

Total Duration : Section A + B = 3 Hours

Total Marks : 80

SECTION - A & SECTION - B

- Instructions :**
- 1) Use **blue/black** ball point pen only.
  - 2) **Do not** write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.
  - 3) **All questions are compulsory.**
  - 4) The number to the **right** indicates **full marks**.
  - 5) Draw diagrams **wherever** necessary.
  - 6) Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.
  - 7) Use a common answer book for all sections.

SECTION - "A" SAQ (50 Marks)

1. Short answer question (**any five out of six**) : [5 × 3 = 15]
- a) ~~Axillary~~ Nerve.
  - b) Lymphatic drainage of stomach.
  - c) Enumerate branches of femoral artery.
  - d) Draw and label 'Typical Synovial Joint'.
  - e) Enumerate muscles of tongue.
  - f) The Biceps Brachii muscle.

2. Short answer question (any five out of six) : [5 × 7 = 35]

- a) Muscles of mastication.
- b) Inversion and Eversion.
- c) T.S. of midbrain at the level of superior colliculus.
- d) Maxilla - Boundaries, Contents and applied anatomy.
- e) Interior of right atrium.
- f) Typical intercoastal space.

**SECTION - "B" LAQ (30 Marks)**

3. Long answer question (any one out of two) : [1 × 15 = 15]

- a) Describe the wrist joint under the following headings :
  - i) Type and Articular surfaces [3]
  - ii) Ligaments. [3]
  - iii) Movements & Muscles. [6]
  - iv) Applied Anatomy. [3]
- b) Describe the Hip joint under the following headings :
  - i) Type and subtype. [1]
  - ii) Articular surfaces. [2]
  - iii) Ligaments. [3]
  - iv) Movements & Muscles. [6]
  - v) Applied Anatomy. [3]

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4. Long answer question (any one out of two) :

[1 × 15 = 15]

a) Describe the Superolateral surface of cerebral hemisphere under the following headings :

i) Sulci and gyri. [5]

ii) Functional areas. [5]

iii) Blood Supply. [3]

iv) Applied Anatomy. [2]

b) Describe the internal capsule and add a note on its applied anatomy.

[15]



FIRST BPTH (2012) Examination, Summer (Phase - III All Other  
Remaining UG/PG Courses) - 2020

BIOCHEMISTRY - III

Total Duration : 2 Hours

Total Marks : 40

- Instructions :**
- 1) Use **blue/black** ball point pen only.
  - 2) **Do not** write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.
  - 3) **All questions are compulsory.**
  - 4) The number to the **right** indicates **full marks**.
  - 5) Draw diagrams **wherever** necessary.
  - 6) Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.
  - 7) Use a common answer book for all sections.

1. Short answer question (any five out of six) : [5 × 3 = 15]

- a) What are mucopolysaccharides? Describe the significance of any three.
- b) State the essential fatty acids & their significance.
- c) Explain the fate of Glycine.
- d) Explain nitrogen balance in normal health.
- e) Explain difference between DNA & RNA.
- f) What is Transamination? State the significance.

2. Short answer question (any five out of six) :

[5 × 5 = 25]

- a) Describe the process of Glycolysis, stating its energetics and regulation.
- b) Define ketosis, ketogenesis & Ketonuria. Describe the conditions leading to them.
- c) State isoenzymes & define their clinical significance.
- d) What is protein energy malnourishment (PEM)? Compare the disorders.
- e) Describe events of muscle contraction & relaxation.
- f) Discuss sources, RDA, biochemical functions & deficiency manifestations of Vitamin C.



**FIRST BPTH (2012) Examination, Summer (Phase - III All Other  
Remaining UG/PG Courses) - 2020  
FUNDAMENTALS OF ELECTRO THERAPY**

Total Duration : Section A + B = 3 Hours

Total Marks : 80

**SECTION - A & SECTION - B**

- Instructions :**
- 1) Use **blue/black** ball point pen only.
  - 2) **Do not** write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.
  - 3) **All questions are compulsory.**
  - 4) The number to the **right** indicates **full marks**.
  - 5) Draw diagrams **wherever** necessary.
  - 6) Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.
  - 7) Use a common answer book for all sections.

**SECTION - "A" SAQ (50 Marks)**

1. Short answer question (**any five** out of six) : **[5 × 3 = 15]**
- a) Define Ohm's law.
  - b) Write three properties of LASER.
  - c) Enumerate any three objective methods of measuring body temperature.
  - d) Enumerate three contraindications and precautions to be taken during application of Paraffin wax bath.
  - e) Write any three differences between Triode and Diode valve.
  - f) Give three uses of Rheostat in electrotherapy equipments.

2. Short answer question (any five out of six): [5 × 7 = 35]
- Draw a neat labelled panel diagram of I.F.T. & I.R.R.
  - Describe the production of Short Wave Diathermy (SWD) with circuit diagram.
  - Difference between Faradic type of current and Galvanic currents.
  - Define Shock. Describe types of Shock. Write precautions to be taken against Earth Shock.
  - State any three Home remedies of superficial heat and write its advantages and disadvantages.
  - Describe production of therapeutic Ultrasound and draw panel diagram of Ultrasound machine.

SECTION - "B" LAQ (30 Marks)

3. Long answer question (any one out of two): [1 × 15 = 15]
- Describe physiological effects of superficial heat. Name different modalities used in physiotherapy to give superficial heat. Explain the role of hypothalamus as thermal regulator.
  - Write in detail methods of application of
    - Whirlpool,
    - Paraffin wax bath.
4. Long answer questions (any one out of two): [1 × 15 = 15]
- Describe Magnetism and the molecular theory of Magnetism. Explain in detail Magnetic effects of electric current.
  - Describe the Electromagnetic Spectrum. Explain in detail Laws governing radiation.



FIRST BPTH (2012) Examination, Summer (Phase - III All Other  
Remaining UG/PG Courses) - 2020

FUNDAMENTALS OF KINESIOLOGY AND KINESIOTHERAPY

Total Duration : Section A + B = 3 Hours

Total Marks : 80

SECTION - A & SECTION - B

- Instructions :**
- 1) Use **blue/black** ball point pen only.
  - 2) **Do not** write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.
  - 3) **All questions are compulsory.**
  - 4) The number to the **right** indicates **full marks**.
  - 5) Draw diagrams **wherever** necessary.
  - 6) Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.
  - 7) Use a common answer book for all sections.

SECTION - "A" SAQ (50 Marks)

1. Short answer question (any five out of six) : [5 × 3 = 15]
- a) Define axes & plane
  - b) Define Work, Energy and Power
  - c) Define Buoyancy
  - d) Define Osteokinematics
  - e) Gravity
  - f) Newtons law of inertia

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2. Short answer question (**any five** out of six): [5 × 7 = 35]
- a) Explain Hanging as starting position, muscle work involved in it and its effects and uses.
  - b) Explain Axial and Vertical Suspension.
  - c) Pulleys.
  - d) Explain Vajrasan posture and its health benefits.
  - e) Explain and draw diagram of knee Ratchet. Enumerate various equipment used in gait training.
  - f) Describe the effects and uses of warm up and cool down Phases.

**SECTION - "B" LAQ (30 Marks)**

3. Long answer question (**any one** out of two) : [1 × 15 = 15]
- a) Define and Classify massage. Discuss in detail petrissage manipulations. Write contraindications for massage. Define and Classify massage. Discuss in detail about the types, effects and uses of kneading manoeuvre. [2+5+5+3]
  - b) Define Yoga. Describe Principles of yoga. Enlist Yogasanas, Explain one Supine and one standing yoga posture. [2+5+8]
4. Long answer question (**any one** out of two) : [1 × 15 = 15]
- a) Describe the principles and uses of goniometry. Write about the different types of goniometers. [5+5+5]
  - b) Define a Lever. Which are different types of lever. Write in detail about all types of levers in the human body with one example each. [2+5+8]



First BPTH (2012) Examination, Summer  
(Phase - III All Other Remaining UG/PG Courses) - 2020  
HUMAN PHYSIOLOGY - II

Total Duration : Section A + B = 3 Hours

Total Marks : 80

SECTION - A & SECTION - B

- Instructions :**
- 1) Use **blue/black** ball point pen only.
  - 2) **Do not** write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.
  - 3) **All** questions are **compulsory**.
  - 4) The number to the **right** indicates **full** marks.
  - 5) Draw diagrams **wherever** necessary.
  - 6) Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.
  - 7) Use a common answer book for all sections.

SECTION - "A" SAQ (50 Marks)

1. Short answer question (any five out of six) : [5 × 3 = 15]
- a) Functions of blood.
  - b) Ovulatory phase of menstrual cycle.
  - c) Gigantism.
  - d) Structure of Cell membrane.
  - e) Regulation of thyroid hormone secretion.
  - f) Presbiopia.