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First B.P.TH. (2012) Examination, Summer - 2025 Phase - II

HUMAN ANATOMY

Total Duration : 3 Hours

Total Marks : 80

Instructions : 1) *Use **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 answerbook for **all** sections.*

SECTION-A (SAQ) (50 Marks)

1. Short Answer Questions (Solve any 5 out of 6): [5×3=15]

a) Mention the arterial supply of stomach.

b) Enumerate cardinal features of large intestine. Mention the peritoneal folds attached to it.

c) Enumerate the layers of scalp.

d) Enumerate the muscles of the perinael body.

e) Draw a well labelled diagram of mediastinal surface of right lung.

f) Enumerate the boundaries and contents of anatomical snuff box.

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2. **Short Answer Questions (Solve any 5 out of 6):** [5×7=35]

a) Posterior triangle of neck- boundaries, contents & applied.

b) Describe Medial longitudinal arch- formation, factors supporting & applied.

c) Mechanism of respiration.

d) Rotator cuff of shoulder joint.

e) Transverse section of medulla oblongata at pyramidal decussation.

f) Describe the blood supply of bones.

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SECTION-B LAQ (30 Marks)

3. **Long Answer Questions (Solve any 1 out of 2):** [1×15=15]

a) Describe the median nerve under the following heads

i) Origin and root value [3]

ii) Course [4]

iii) Branches and distribution [4]

iv) Applied anatomy [4]

b) Describe the hip joint under the following heads

i) Type of joint and articular surfaces [3]

ii) Capsule and ligaments [3]

iii) Relations [3]

iv) Movements and muscles producing them [3]

v) Applied anatomy [3]

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4. Long Answer Questions (Solve any 1 out of 2) [1×15=15]

a) Mention the surfaces, borders & lobes of cerebrum. [3]

Describe the superolateral surface of the cerebrum under the following heads.

i) Sulci & gyri [3]

ii) Blood supply [2]

iii) Functional areas [4]

iv) Applied anatomy [3]

b) Give the classification of dural venous sinuses. [3]

Describe the cavernous sinus under the following heads

i) Location [2]

ii) Relations [3]

iii) Tributaries and connections [4]

iv) Applied anatomy [3]

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First B.P.TH. (2012) Examination, Summer - 2025 Phase - II

BIOCHEMISTRY

Total Duration : 2 Hours

Total Marks : 40

Instructions : 1) *Use **black** ball point pen only.*

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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 answerbook for **all** sections.*

1. Short Answer Questions (Solve any five out of six): [5×3=15]

a) What is transmethylation? Give any two examples of it.

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b) Enumerate the tests done under lipid profile. Write the clinical significance of total cholesterol estimation.

c) Write the importance of dietary fibers.

d) Define clearance. Write a note on creatinine clearance.

e) What are essential fatty acids? Write any TWO functions of them.

f) What is glycosuria? Name the conditions in which glycosuria occurs.

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2. Short Answer Questions (any five out of six): [5×5=25

a) What are ketone bodies? Write their examples and explain syntheti pathway.

b) Explain the mechanism and biochemical events that occur during musc contraction.

c) What are type 2 hormones? Write the mechanism of action of type hormones.

d) What is Basal Metabolic Rate? Describe factors affecting BMR.

e) Write pathway of glycolysis with its energetics.

f) Write in brief about factors affecting enzyme action.

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First B.P.TH. (2012) Examination, Summer - 2025 Phase - II

HUMAN PHYSIOLOGY

Total Duration : 3 Hours

Total Marks : 80

Instructions : 1) *Use **black** ball point pen only.*

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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 answerbook for **all** sections.*

SECTION-A (SAQ) (50 Marks)

1. Short Answer Questions (Solve any 5 out of 6): **[5×3=15]**

a) What is Gain of a control mechanism ? What is its significance?

b) What is Laplace Law ? Give its application.

c) Classify White Blood Cells with important functions of each.

d) Define Sarcomere. Enumerate important properties of Skeletal muscle.

e) Define Glomerular Filtration Rate (GFR). Give its normal value.

f) Define Isometric and Isotonic Contraction with suitable example of each.

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2. Short Answer Questions (Solve any 5 out of 6): [5×7=35]

a) Acromegaly.

b) Describe the Juxta-Glomerular apparatus. Add a note on diuretics.

c) Cushing's Syndrome.

d) Draw a neat & labeled diagram of Respiratory membrane. Explain the factors affecting diffusion across the membrane.

e) Describe Cardio- respiratory changes during acute exercise.

f) Describe the role of respiratory centers in neural regulation of respiration.

SECTION-B (LAQ) (30 Marks)

3. Long Answer Questions (Solve any 1 out of 2): [1×15=15]

a) Define Hemostasis. What are the stages of hemostasis? Explain in detail the mechanism blood coagulation.

b) Explain in detail the Sliding filament theory of Skeletal muscle contraction. Add a note on energetics of muscle contraction.

4. Long Answer Questions (Solve any 1 out of 2): [1×15=15]

a) Describe and differentiate the properties of skeletal, cardiac & smooth muscle.

b) Describe Diabetes Mellitus under following headings:

Definition

Types

Causes

Pathophysiology

Clinical Features

Physiological basis of Treatment

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First B.P.TH. (2012) Examination, Summer - 2025 Phase - II
FUNDAMENTALS OF KINESIOLOGY AND KINESIOTHERAPY

Total Duration : 3 Hours

Total Marks : 80

Instructions :
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5) Draw diagrams **wherever** necessary.
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7) Use a common answerbook for all sections.

SECTION - A (SAQ) (50 Marks)

1. Short Answer Questions (Solve any 5 out of 6) : **[5 × 3 = 15]**

a) Write advantages of relaxation

b) State Newtons third law with example.

c) Write a note on Parallelogram of forces.

d) Enumerate Types of Goniometer.

e) Write the parts of Axillary crutches.

f) Define Centre of Gravity and Base of support.

2. Short Answer Questions (Solve any 5 out of 6) **[5 × 7 = 35]**

a) Define a pulley. Describe types of pulley. Add a note on anatomical pulley.

b) Describe the physical properties of water.

c) Describe the effects of warm up and cool down phase of Aerobic exercises.

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d) Classify types of muscle contractions. Describe any one in detail.

e) Explain Standing as starting position. Write the muscle work involved in it along with it's effects and uses.

f) Describe the effects and uses of group exercises.

SECTION - B (LAQ) (30 Marks)

3. Long Answer Questions(Solve any 1 Out of 2) : **[1 × 15 = 15]**

a) i) Define Lever. **[1]**

ii) Describe different types of lever with suitable examples and in relation to human body. **[10]**

iii) Add a note on uses of levers in physiotherapy. **[4]**

b) i) Define Massage. Write classification of Massage manipulations. **[7]**

ii) Explain Petrissage manipulation in detail. **[8]**

4. Long Answer Questions (Solve any 1 Out of 2) : **[1 × 15 = 15]**

a) i) Define Suspension Therapy. **[2]**

ii) Describe the apparatus and accessories used for suspension. **[8]**

iii) Describe different types of suspension. **[5]**

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b) i) Define Passive movements. **[2]**

ii) Write the classification and indication of passive movements. **[8]**

iii) Write the effects and uses of passive movements. **[5]**



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First B.P.TH. (2012) Examination, Summer - 2025 Phase - II
FUNDAMENTALS OF ELECTRO THERAPY

Total Duration : 3 Hours

Total Marks : 80

Instructions :
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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 answerbook for all sections.*

SECTION - A (50 Marks)

1. Short Answer Questions (Solve any 5 out of 6) : **[5 × 3 = 15]**

a) Define Coupling Media. Give its application in electrotherapy.

b) What is Capacitance? Give an application in electrotherapy.

c) Define TENS. Enlist its types.

d) What is a Fuse? Give its application.

e) Define Specific Heat.

f) Enumerate any three Physiological effects of superficial Heat.

2. Short Answer Questions (Solve any 5 out of 6) **[5 × 7 = 35]**

a) Describe the Resistance in series and Resistance in Parallel as per Ohm's law.

b) Desribe the different types of LASER. Write its properties.

c) Explain the laws of Reflection, Refraction and Absorption.

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d) What are the components of Ultrasound machine. Describe production of Ultrasound.

e) What is a Rheostat? Give its application in electrotherapy.

f) What are the different sources of Infra red radiation?

SECTION - B (30 Marks)

3. Long Answer Questions (Solve any 1 Out of 2) : [1 × 15 = 15]

a) Explain the various types of Low frequency currents used in Physiotherapy along with their parameters. Draw a panel diagram of Multistimulator.

b) Describe Contrast Bath. Explain in detail its physiological and therapeutic effects. Write a note on techniques of application.

4. Long Answer Questions (Solve any 1 Out of 2) : [1 × 15 = 15]

a) Describe production of Short Wave Diathermy(SWD).Draw the panel diagram of SWD and describe indications and contraindications.

b) Discuss Physiological effects of Superficial heat. Describe various methods of applying Paraffin Wax Bath.

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