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# First B.P.TH. (2012) Examination, (Phase - III) Winter - 2021
# 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) Sodium-potassium pump.

b) Strength-Duration curve.

c) Function of Surfactant.

d) Heart sounds.

e) Physiological actions of Oxytocin.

f) Colour blindness.

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

a) Spike potential.

b) Sarcotubular system.

c) Respiratory membrane.

d) Origin & spread of cardiac impulse.

e) Describe factors affecting Glomerular filtration.

f) Hormonal regulation of menstrual cycle.

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

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

a) Enumerate properties of nerve. Describe production & conduction of nerve impulse. [3 + 12]

b) Describe the properties of skeletal muscle & add a note on structure of sarcomere. [12 + 3]

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

a) Describe dorsal column medical leminiscus system with a well labeled diagram. Name the sensations carried by this pathway. [12 + 3]

b) Give the structure of synapse. Give detail about synaptic transmission & enumerate its properties. [5 + 7 + 3]

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# First B.P.TH. (2012) Examination, Winter - 2022
## HUMAN PHYSIOLOGY

Total Duration : 3 Hours

Total Marks : 80

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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" SAQ (50 Marks)

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

a) Positive feed - back mechanism.

b) Constituent of Pancreatic juice.

c) Factors affecting Glomerular Filteration Rate.

d) Functions of middle ear.

e) Myxedema.

f) Primary active transport.

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

a) Origin & Spread of cardiac impulse.

b) Oxygen dissociation curve.

c) Cardio - respiratory changes during moderate exercise.

d) ECG as seen in Lead II.

e) Anti Diuretic Hormone.

f) Describe left ventricular pressure and volume changes during cardiac cycle.

## SECTION "B" LAQ (30 Marks)

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

a) Draw a neat, labelled diagram of Neuro Muscular junction. Describe the process of neuromuscular transmission. Add a note on myasthenia gravis.

b) Define blood pressure. Describe the determinants of blood pressure. Describe the long term regulation of blood pressure.

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

a) Enumerate the descending tracts. Describe the Pyramidal tract. What are the effects of its lesion at various levels?

b) What are the functions of spinal cord? Describe the stages of spinal shock. Add a note on Brown Sequard syndrome.

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Total No. of Pages : 2

# First B.P.TH. (2012) Examination, (Phase - III) Winter - 2023
## HUMAN PHYSIOLOGY

Total Duration : 3 Hours  Total Marks : 80

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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" SAQ (50 Marks)

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

a) Define Synapse. Enumerate any 6 properties of synapse.

b) Explain Baroreceptor reflex mechanism.

c) Define Law of Gut. What are the principal movements seen in GIT?

d) Give composition and functions of blood..

e) Draw a neat & labeled diagram of Neuromuscular Junction. Add a note on myasthenia gravis.

f) Define Homeostasis. Add a note on Negative feedback mechanism.

[5×7=35]

2. Short answer question (**Solve any** 5 out of 6) :

a) Describe functions of Cerebellum.

b) Describe Ovarian Cycle.

c) Describe the withdrawal & crossed extensor reflexes in spinal cord.

d) Define erythropoiesis. Explain stages of erythropoiesis.

e) Give physiological actions of thyroid hormones.

f) Define cardiac output. Explain the factors affecting cardiac output.

## SECTION "B" LAQ (30 Marks)

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

a) Describe Cardio-respiratory changes during various phases of exercise.

b) Draw & Describe the oxygen hemoglobin dissociation curve. State the significance of its sigmoid shape. Describe briefly the factors affecting the shift in curve.

4. Long answer question (**Solve any** 1 out of 2): [1×15=15]

a) Define Resting membrane potential (RMP). Explain genesis of RMP. Why RMP is close to the equilibrium potential of K+ ions?

b) Define Circulatory Shock. What are the other types of shock? Describe compensatory mechanisms in Circulatory Shock.

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# First B.P.T.H. (2012) Examination, Winter - 2024 Phase - III
## HUMAN PHYSIOLOGY

Total Duration : 3 Hours | Total Marks : 80

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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) Wallerian degeneration.
b) Explain Baroreceptor reflex.
c) Define bleeding time with its normal value. What is the role of platelets in maintaining normal bleeding time?
d) Enumerate the prominent cell organelles. Write in brief structure and function of any one of the cell organelle.
e) Classify various types of Leucocytes present in blood. State the major functions of each.
f) Define homeostasis. Give two examples of positive & negative feedback mechanisms each.

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

a) Give physiologic actions of growth hormone.
b) Define hypoxia. Describe different types of hypoxia.
c) Define referred pain. Give examples of referred pain. Describe theories of referred pain.

d) Explain the various Lung volumes & capacities. How are applied to differentiate obstructive & restrictive lung diseases?

e) Give the composition and Functions of surfactant. Add a note on respiratory distress syndrome of newborn.

f) Explain the basis of Erythroblastosis foetalis. What are the measures to prevent the condition?

## SECTION - B (30 Marks)

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

a) Define Lung Compliance. How is it measured ? Mention the factors affecting lung compliance.

b) Define Cardiac Cycle. Describe various phases of Cardiac Cycle. Give the pressure & volume changes during the various phases.

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

a) Enumerate Ascending and Descending tracts. Give origin, course, termination and functions of pyramidal tracts.

b) Define sarcomere.Explain molecular basis of skeletal muscle contraction with applied importance.