

63111

First B.P.Th. (2012) Examination, Winter 2016
HUMAN ANATOMY

Total Duration : 3 Hours

Total Marks : 80

- 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) Enumerate the branches of arch of aorta.
 - b) Specify the coverings of testis.
 - c) Enumerate the extraocular muscles supplied by oculomotor nerve.
 - d) Name the muscles of mastication. Specify their nerve supply.
 - e) Enumerate the arteries supplying stomach.
 - f) Draw and label a diagram depicting the histology of skeletal muscle.
2. Short answer question (**any five** out of six) : (5×7=35)
 - a) Specify the boundaries and contents of axilla.
 - b) Specify the commencement, course, branches and distribution of sciatic nerve.
 - c) Specify the attachments, nerve supply and actions of sternocleidomastoid muscle.
 - d) Describe the right atrium.
 - e) Specify the boundaries and contents of femoral triangle.
 - f) Specify the attachments, nerve supply and actions of hamstring muscles.

P.T.O.



SECTION "B" LAQ (30 Marks)

3. Long answer question (**any one** out of two) : (1×15=15)
- a) Describe knee joint under the following headings.
- i) Type of joint and articular surfaces. 4
 - ii) Ligaments. 4
 - iii) Movements and muscles producing them. 5
 - iv) Applied anatomy. 2
- b) Describe shoulder joint under the following headings.
- i) Type of joint and articular surfaces. 2
 - ii) Ligaments. 3
 - iii) Relations. 3
 - iv) Movements and muscles producing them. 5
 - v) Applied anatomy. 2
4. Long answer question (**any one** out of two) : (1×15=15)
- a) Describe the cerebellum under the following headings.
- i) Lobes, fissures, surfaces. 5
 - ii) Functional classification. 3
 - iii) Cerebellar peduncles. 4
 - iv) Applied anatomy. 3
- b) Describe the hypoglossal nerve under the following headings.
- i) Nucleus and functional components. 2
 - ii) Intracranial course. 3
 - iii) Extra cranial course. 3
 - iv) Branches and distribution. 5
 - v) Applied anatomy. 2

First B.P.Th. (2012) Examination, Winter 2016
BIOCHEMISTRY

Total Duration : 2 Hours

Total Marks : 40

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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 section.**

1. Short answer question (**any five** out of six) : (5×3=15)
 - a) How are enzymes classified ? Give suitable examples.
 - b) What are the Recommended Dietary Allowance (RDA), biochemical significance and deficiency disorders for vitamin A ?
 - c) State the role of the second messengers in regulations of hormonal action.
 - d) What are the major distinguishing features between marasmus and kwashiorkor ?
 - e) What are laboratory tests to assess liver function based on synthetic function ?
 - f) What is the biochemical importance of brown adipose tissue ?
2. Short answer question (**any five** out of six) : (5×5=25)
 - a) Discuss various mucopolysaccharides and their roles.
 - b) Describe biochemical mechanism of contraction and relaxation of muscle.
 - c) Give an account of diagnostics and thearapeutic use of enzymes.
 - d) Write a short note on detoxification of ammonia in the body.
 - e) Describe deficiency manifestations of Vitamin B1 and Vitamin B6.
 - f) Write functions of phospholipids.

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First B.P.Th. (2012) Examination, Winter 2016
FUNDAMENTALS OF ELECTRO THERAPY

Total Duration : Section A + B = 3 Hours

Total Marks : 80

SECTION – A & SECTION – B

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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) State Ohms Law.
 - b) What is Electromagnetic Induction ?
 - c) Define Latent Heat and give example where concept of Latent Heat is used for practical application in physiotherapy.
 - d) What is a Fuse and how does it work ?
 - e) State contraindications for Hydrocollateral hot pack treatment.
 - f) State factors affecting skin resistance.

2. Short answer question (**any five** out of six) : (5×7=35)
 - a) Describe Earth Shock with example. What precautions can be taken against it ?
 - b) State and explain Laws of Reflection, Refraction and Absorption.

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- c) Describe types of Infra-red Generators.
- d) What is LASER ? Describe its types and properties.
- e) Describe production of Ultrasound.
- f) Describe Ultraviolet Radiation production in High Pressure Mercury Vapor Burner.

SECTION – B LAQ (30 Marks)

- 3. Long answer question (**any one** out of two) : (1×15=15)
 - a) Describe physiological effects of Cryotherapy. Describe various methods of applying cryotherapy. (7+8)
 - b) Describe physiological effects of Superficial Heat. Describe various methods of applying Paraffin Wax Bath. (7+8)

- 4. Long answer question (**any one** out of two) : (1×15=15)
 - a) Classify Low Frequency Currents. Describe different wave forms of Faradic current. Draw and label a panel diagram of Diagnostic Electrical Stimulator. (5+5+5)
 - b) Describe construction and production of Short Wave Diathermy. Draw and label a panel diagram of Short Wave Diathermy. (10+5)



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First B.P.Th. (2012) Examination, Winter – 2016
FUNDAMENTALS OF KINESIOLOGY AND KINESIOTHERAPY

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.
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 - 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) Write types of equilibrium.
 - b) Enumerate cardinal Planes and Axes.
 - c) Range of muscle work.
 - d) State Newton's First Law with example.
 - e) Define Center of Gravity and Line of Gravity.
 - f) Define Third order lever with one example.

2. Short answer question (**any five** out of six) : (5×7=35)
 - a) Describe classification of movements with examples.
 - b) Describe the principles of relaxation.
 - c) Describe the effects of warm up and cool down phase of Aerobic exercise programme.
 - d) Describe the equipments used to improve joint mobility in therapeutic gymnasium.
 - e) Describe Indications and contraindications to Hydrotherapy.
 - f) Describe group action of muscles (agonist, antagonist, synergist and fixators).

P.T.O.



SECTION – B LAQ (30 Marks)

3. Long answer question (**any one** out of two) : (1×15=15)
- Define and classify methods of suspension therapy. Describe the apparatus and accessories used for the suspension.
 - Describe principles and uses of goniometry. Write down different types of goniometers. Describe in detail the universal goniometer.
4. Long answer question (**any one** out of two) : (1×15=15)
- Define massage. Describe classification of massage manipulations. Add a note on Physiological and therapeutic effects of massage.
 - Describe the muscle work in fundamental standing position. Describe the derived positions from standing by alteration of trunk and legs.

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First B.P.Th. (2012) Examination, Winter 2016
HUMAN PHYSIOLOGY

Total Duration : Section A + B = 3 Hours

Total Marks : 80

SECTION – A & SECTION – B

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 - 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) Classify the different mechanisms of transport across cell membrane.
 - b) Functions of middle ear.
 - c) Factors affecting Glomerular filtration rate.
 - d) Regulation of erythropoiesis.
 - e) Functions of glucocorticoids.
 - f) Composition and functions of gastric juice.

2. Short answer question (**any five** out of six) : (5×7=35)
- a) Define cardiac output and its regulation.
 - b) Define physical fitness and describe tests for physical fitness.
 - c) Lung compliance.
 - d) Length tension relationship in skeletal muscle.
 - e) Role of chemo-receptors in regulation of respiration.
 - f) Classify nerve fibers and enlist properties of nerve fiber.

P.T.O.

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SECTION – B (LAQ) (30 Marks)

3. Long answer question (**any one** out of two) : (1×15=15)
- a) Define sarcoplasmic triad. 4
 - Enlist differences between sarcoplasmic triads of skeletal and cardiac muscle. 4
 - Discuss Excitation contraction coupling in skeletal muscle contraction. 10
 - b) Define Action potential. 1
 - Draw a well labeled diagram of action potential in nerve fiber. 4
 - Describe ionic basis of action potential in nerve fiber. 10
4. Long answer question (**any one** out of two) : (1×15=15)
- a) Enumerate various ascending tracts in the spinal cord. 4
 - Describe pathways for transmission of fine touch from upper arm. 11
 - b) Define blood pressure. 1
 - Classify the mechanisms involved in regulation of blood pressure. 4
 - Describe the short term regulation of blood pressure. 10