



63111

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

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) Enumerate the functions of skin.
 - b) Enumerate the supports of the uterus.
 - c) Enumerate the branches of external carotid artery.
 - d) Give differences between small intestine and large intestine.
 - e) Enumerate the extraocular muscles and mention their nerve supply.
 - f) Histology of the cardiac muscle.
2. Short answer question (**any five** out of six) : **(5×7=35)**
 - a) Boundaries and contents of axilla.
 - b) Sternocleidomastoid muscle
 - c) Bronchopulmonary segments of right lung.
 - d) Femoral nerve.
 - e) Boundaries and contents of superior mediastinum.
 - f) Lateral longitudinal arch of foot.

P.T.O.



SECTION – B LAQ (30 Marks)

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

(1×15=15)

a) Describe the hip joint under the following headings :

- i) Type and articular surfaces
- ii) Ligaments
- iii) Relations
- iv) Movements and muscles producing movements
- v) Applied anatomy.

b) Describe the wrist joint under the following headings :

- i) Type and articular surfaces
- ii) Ligaments
- iii) Relations
- iv) Movements and muscles producing movements
- v) Applied anatomy.

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

(1×15=15)

a) Describe the internal capsule of cerebrum under the following headings :

- i) Parts and relations
- ii) Fibers present in different parts
- iii) Blood supply
- iv) Applied anatomy.

b) Describe the facial nerve under the following headings :

- i) Nuclei
- ii) Course and relations
- iii) Branches and distribution
- iv) Applied anatomy.



63112

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

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Total Marks : 80

SECTION – A & SECTION – B

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- 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) Platelets.
 - b) Functions of bile.
 - c) Parathormone.
 - d) Factors affecting GFR.
 - e) Facilitated diffusion.
 - f) Dark adaptation.
2. Short answer question (**any five** out of six) : (5×7=35)
 - a) Draw and write details of ECG in lead 2.
 - b) Carbon dioxide transport in the body.
 - c) Cardiorespiratory changes during moderate exercise.
 - d) Physiological changes at high altitude.
 - e) Enumerate functions of cerebellum.
 - f) Strength duration curve.

P.T.O.



SECTION – B LAQ (30 Marks)

3. Long answer question (any one out of two) : (1×15=15)
- a) Define motor unit. Describe in detail the factors controlling the tension development in the skeletal muscle.
 - b) Draw neat label diagram of sarcoplasmic reticulum in skeletal muscle. What are the differences in sarcoplasmic reticulum of skeletal and cardiac muscle ? Write the process of excitation contraction coupling in a skeletal muscle.
4. Long answer question (any one out of two) : (1×15=15)
- a) Define and classify synapse. Draw well labelled diagram of the synapse. Enumerate and Explain various properties of synapse.
 - b) Define cardiac cycle. Explain various events in cardiac cycle. Draw well labelled diagram of pressure volume changes in the left ventricle.



63113

First B.P.Th. (2012) Examination, Summer 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 answer book for **all** Sections.

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

(5×3=15)

a) Classify polysaccharides giving suitable examples.

b) Classify lipoproteins, stating their significance.

c) Define essential amino acids and state their significance.

d) Explain structure of DNA. *Biochemical function of Ca.*

e) Describe functions, deficiency disorders of iodine.

f) State the role of isoenzymes in clinical diagnosis.

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

(5×5=25)

a) Describe the biochemical functions, RDA, deficiency manifestations of Vitamin A.

b) Enumerate glycogen storage diseases and their significance.

c) Write short answer on ketosis, ketogenesis and ketonuria.

d) Explain competitive inhibition of enzyme with examples.

e) What are liver function tests ? Explain excretory type of functions.

f) Explain location, sources of substrates and regulation of Urea cycle.



63114

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

Total Duration : Section A + B = 3 Hours

Total Marks : 80

SECTION – A & SECTION – B

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- 4) The number to the **right** indicates **full** marks.
- 5) Draw diagrams **wherever** necessary.
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- 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 axis and planes with examples.
- b) What are the parts of parallel bars ?
- c) State Newton's second law with example.
- d) Define line of gravity.
- e) Write advantages of relaxation.
- f) Write advantages of free exercises.

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

(5×7=35)

- a) Explain the different types of equilibrium with one example each.
- b) Give the effects and uses of hydrotherapy.
- c) Give the effects and uses of resisted exercises.
- d) Describe the effects and uses of warm up and cool down phases.
- e) Give the principles of Yoga. Describe and give the uses of Paschimottasan.
- f) Describe sitting as a fundamental starting position.

P.T.O.



SECTION – B LAQ (30 Marks)

3. Long answer question (**any one** out of two) : (1×15=15)
- a) Describe and classify methods of suspension therapy. Write down the advantages and apparatus used in suspension therapy.
 - b) Define and classify massage. Discuss in detail about the types, effects and uses of kneading manoeuvre.
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.
 - b) Define a lever. Which are the different types of levers ? Write in detail about all types of levers in the human body with one example each.



63115

First B.P.Th. (2012) Examination, Summer 2016
FUNDAMENTALS OF ELECTROTHERAPY

Total Duration : Section A + B = 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 answer book for **all** Sections.

SECTION – A SAQ (50 Marks)

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

(5×3=15)

- Cosine Law.
- Contrast Bath.
- Capacitance.
- Joule's Law.
- Amplitude modulation in interferential therapy.
- Precautions for application of thermotherapy.

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

(5×7=35)

- Classification of currents.
- Define TENS. Write down its types.
- Sources of infrared radiations.
- Modes of heat transfer.
- Whirlpool bath.
- What are the types of LASER ? Write its properties.

P.T.O.



SECTION – B LAQ (30 Marks)

3. Long answer question (**any one** out of two) : (1×15=15)
- a) What is cryotherapy ? Write down various methods and the techniques of its application.
 - b) Explain the production of UVR with a labelled diagram. Add a note on tridymite formation.
4. Long answer question (**any one** out of two) : (1×15=15)
- a) Draw a panel diagram of therapeutic ultra sound and explain its production. Add a note on coupling media.
 - b) Draw a circuit diagram of Short Wave Diathermy. Write down the physiological effects and dangers of Short Wave Diathermy.



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

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Total Marks : 80

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 - 7) Use a common answer book for **all** sections.

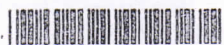
SECTION "A" SAQ (50 Marks)

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.



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



63112

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HUMAN PHYSIOLOGY

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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.



SECTION – B (LAQ) (30 Marks)

3. Long answer question (any one out of two) : (1×15=15)
- a) Define sarcoplasmic triad. 1
- 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

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BIOCHEMISTRY

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 - 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 therapeutic 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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