

TILAK MAHARASHTRA VIDYAPEETH (TRUST)
LOKMANYA MEDICAL COLLEGE OF PHYSIOTHERAPY

Affiliated to MUHS

Plot No. 3, Sector 14, Near Raghunath Vihar, Kharghar, Navi Mumbai 410210.

Email ID: lokmanyamcop@gmail.com/administration@lmcop.edu.in

Web Site: <http://www.lmcop.edu.in>

PRELIMINARY EXAMINATION 1ST YEAR BPT_h 2018-19
FUNDAMENTALS OF ELECTROTHERAPY

Total Duration: Section A+B = 3 hours

Date: 10/04/2019

Total Marks: 80

Instruction:

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 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 Section.
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SECTION – A SAQ (50 Marks)

1. Short answer questions (Any five out of six) (5X3=15)

1. Explain Lewis hunting reaction.
2. State cosine law with diagram.
3. Explain principle IFT.
4. Define capacitance & state its unit.
5. Define triode & diode valve.
6. Describe characteristics of laser.

2. Short answer questions (Any five out of six) (5X7=35)

1. Discuss luminous & non luminous generator in IR.
2. State & explain laws of Reflexion, refraction & absorption.
3. Differences between faradic & galvanic currents.
4. Describe the Kromayer lamp.
5. Explain in detail of Physiological & Therapeutic effect of short wave diathermy.
6. Describe production of Ultrasound.

SECTION – B LAQ (30 Marks)

3. Long answer question (any 1 out of 2) (15 marks)

1. Explain in detail about physiological & therapeutic effects of paraffin wax bath (PWB).
Describe various methods of application of paraffin wax bath.
Add note on its contra-indication. (5+8+2)
2. Describe various methods of heat transfer. Describe physiological effects of Hydrocollateral Pack. Describe the Indications & Contraindication. (5+5+5)

4. Long answer question (any 1 out of 2) (15 marks)

1. Discuss therapeutic & physiological effects of contrast bath.
Write about its indication & contra-Indication. (10+5)
2. Describe different type of electrodes used for low frequency currents.
Discuss different wave form of interrupted direct current.
Draw & label panel diagram of multi-stimulator. (5+5+5)

-X-X-X-X-X-X-X-X-X-

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PRELIMINARY EXAMINATION 1st YEAR BPT^h 2018-19
BIOCHEMISTRY

Total Duration: 2 hours

Date: 20/04/2019

Total Marks: 40

Instruction:

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 3. All questions are compulsory.
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 7. Use a common answer book for all Section.
-

Q.1 Short answer questions (Any five out of six) :

(5x3=15)

1. Enumerate factors affecting Basal Metabolic Rate (BMR).
2. Name lipid profile tests.
3. Write functions of calcium.
4. Write note on Kwashiorkor.
5. Explain transamination reaction in detail.
6. Draw diagram of Electron Transfer Chain (ETC) also showing the direction of flow of electrons.

Q.2 Short answer question. (Any Five out of six)

(5x5=25)

1. Explain the Beta oxidation of Palmitic acid with its energetics.
2. Describe any three renal function tests.
3. Describe effect of starvation of different organs of body.
4. Differentiate between fat soluble & water soluble vitamins.
5. Write Functions of phospholipids.
6. Define enzymes? Classify enzymes in details with examples?

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PRELIMINARY EXAMINATION 1st YEAR BPT^h 2018-19
HUMAN PHYSIOLOGY

Total Duration: Section A+B = 3 hours

Date: 18/04/2019

Total Marks: 80

Instruction:

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 7. Use a common answer book for all Section.
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SECTION – A SAQ (50 Marks)

A. Short answer questions (Any five out of six) :

(5x3=15)

1. Reflex arc.
2. Structure and junctions of cell membrane.
3. Parkinsonism.
4. Functions of testosterone.
5. Effects of hypersecretion of growth hormone.
6. Micturation reflex.

B. Short answer question. (Any five out of six)

(5X7=35)

1. Oxygen deficit and oxygen debt.
2. Functions of the hypothalamus.
3. Uterine changes during the menstrual cycle and the hormonal control of these changes.
4. Refractive errors of the eye and their correction.
5. The origin and spread of the cardiac impulse.
6. Action potential and its properties.

SECTION – B LAQ (30 Marks)

C. Long answer question. (Any one out of two) (1x15=15)

1. What is excitation-contraction coupling. Describe the sarco-tubular system in skeletal muscle and explain skeletal muscle contraction. (4+4+7)
2. Describe the origin, course and functions of the pyramidal tracts (corticospinal tracts). What are the differences between upper and lower motor neuron lesions. Add a note on hemiplegia.

D. Long answer question. (Any one out of two) (1x15=15)

1. Draw a diagram showing clearly the neural regulation of respiration and describe the chemical regulation of respiration. (7+8=15)
2. Define blood pressure. What are the physiological variations in blood pressure. Enumerate the different mechanisms of blood pressure regulation and describe the renal mechanism of blood pressure regulation. (4+3+8=15)

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Preliminary Examination 1st year BPTth 2018-19

Subject: - Anatomy

Total Duration: - Section A+B=3 hours

Date: - 15 April 2019

Total Marks: - 80

Instruction:

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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 Section.
-

SECTION – A SAQ (50Marks)

Q1. Short answer question: (any 5 out of 6)

5x3=15m

1. Openings of right atrium.
2. Erbs palsy.
3. Enumerate the branches of axillary artery.
4. Stomach bed.
5. Give the attachments and nerve supply of deltoid muscles.
6. Blood supply of long bones.

Q2. Short answer question: (any 5 out of 6)

5x7=35m

1. Ulnar nerve.
2. Classify supports of uterus. Add a note on its applied.
3. Curvatures of the vertebral column.
4. Popliteal fossa.
5. Typical intercostal space.
6. Medial longitudinal arch of foot.

SECTION – B LAQ (30Marks)

Q3. Long answer question:

1x15=15m

1. Describe the knee joint under the following heading:

- | | |
|---|---|
| a) Type | 1 |
| b) Articular surface | 1 |
| c) Relation | 3 |
| d) Ligaments | 3 |
| e) Movements and muscles producing movement | 4 |
| f) Applied anatomy | 3 |

OR

2. Describe sciatic nerve. Add a note on its clinical Anatomy.

Q4. Long answer question:

1x15=15m

1. Describe the cerebellum under the following headings.

- | | |
|-----------------------------------|---|
| a) Subdivision, lobes and fissure | 5 |
| b) Connections | 4 |
| c) Functions | 3 |
| d) Applied anatomy | 3 |

OR

2. Describe the fourth ventricle of the brain and add a note on CSF (Cerebro spinal fluid) circulation.

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PRELIMINARY EXAMINATION 1ST YEAR BPT 2018-19
FUNDAMENTALS OF KINESIOLOGY & KINESIOTHERAPY

Total Duration: Section A+B = 3 hours

Date: 12/04/2019

Total Marks: 80

Instruction:

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 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 Section.

SECTION – A SAQ (50 Marks)

1. Short answer questions (5X3=15)

- a) Enumerate axes and planes with examples
- b) 2nd order lever
- c) Shoulder wheel
- d) Principles of general relaxation
- e) Buoyancy and its role in physiotherapy
- f) Enumerate different positions derived from standing

2. Short answer questions (5X7=35)

- a) Give the effects and uses of resisted exercises
- b) Write the principles of Yoga. Describe and give the uses of Vajrasana.
- c) Explain the different types of equilibrium with one example each.
- d) Describe sitting as fundamental starting position
- e) Classification of massage. Petrissage stroke and effects
- f) Types of muscle action. Write a note on angle of pull.

SECTION – B LAQ (30 Marks)

3. Long answer question (any 1 out of 2) (15 marks)

- a) Classify passive movements (4)
Write the principles of passive movements. (5)
Describe passive movements of the Right Shoulder Joint. (6)

b) Discuss in detail physiological effects of Hydrotherapy. Enumerate the contraindications (12+3= 15marks)

4. Long answer question (any 1 out of 2) (15 marks)

- a) Describe principles of suspension. (4)
Describe suspension apparatus in detail (7)
Add a note on effects and uses (4)
- b) Principles of group therapy (5)
Formation of an exercise group (4)
Therapeutic effects of group exercise (6)

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TERMINAL EXAMINATION 1st YEAR BPT^h 2018-19 SUMMER
HUMAN PHYSIOLOGY

Total Duration: Section A+B = 3 hours

Date: 14/01/2019

Total Marks: 80

Instruction:

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 7. Use a common answer book for all Section.
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SECTION – A SAQ (40 Marks)

A. Short answer questions (Any five out of Six) :

(5x3=15)

1. Cell Membrane
2. Vital Capacity
3. Platelets
4. Resting membrane potential
5. Juxta glomerular apparatus
6. Feedback mechanisms in homeostasis.

B. Short answer questions (Any five out of Six) :

(5x7=35)

1. Regulation of heart rate.
2. Mechanism of breathing.
3. Micturation reflex.
4. Ventricular events during the cardiac cycle.
5. Neural regulation of respiration.
6. What are the different types of membrane transport? Discuss active transport.

- C. Draw and label a neuromuscular junction. Explain the sequence of events taking place across the neuromuscular junction. Add a note on Myasthenia gravis.

(4+8+3=15)

OR

Draw and label a sarcomere. Name the contractile proteins in skeletal muscle.

Discuss the molecular basis of skeletal muscle contraction.

(4+3+8=15)

- D. Define blood pressure. What are the physiological variations in blood pressure? Explain in detail the renal mechanisms in the regulation of blood pressure.

(3+4+8=15)

OR

Explain the transport of oxygen in the blood. Add a note on haemoglobin oxygen dissociation curve.

(9+6=15)

X-X-X-X-X-X-X-X

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TERMINAL EXAMINATION 1ST YEAR BPTth 2018-19
FUNDAMENTALS OF KINESIOTHERAPY & KINESIOLOGY

Total Duration: Section A+B = 3 hours

Date: 16/01/2019

Total Marks: 80

Instruction:

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 7. Use a common answer book for all Section.
-

SECTION – A SAQ (40 Marks)

A. Short answer questions (Any five out of Six) :

(5x3=15)

- a) State Newton's second law of motion with example.
- b) Define Biomechanics & classify the same.
- c) Range of muscle work.
- d) Define Center Of Gravity, Base Of Support & equilibrium.
- e) Write note on passive insufficiency of a muscle.
- f) Note on movable pulley.

B. Short answer questions (Any five out of Six) :

(5x7=35)

- a) Define Relaxation. Describe any one method in detail.
- b) Explain the principle of passive movements in detail.
- c) Explain standing position & write its muscle work.
- d) Write note on types of muscle work.
- e) Open Vs close kinematic exercises.
- f) Explain in details vertical suspension & give any one example of it.

SECTION – B LAQ (15 Marks)

- Q. C)** Describe Axes & planes in details with examples. Define angle of pull, movement arm of a force & their importances. **(15*1=15)**

OR

Write in detail classification of massage manipulations. Describe in detail about the types, effects & uses of kneading manoeuvre.

- Q. D)** Define a lever. Which are different types of levers? Write in detail about all types of levers in the human body with one example, add note of Medical Advantage. **(15*1=15)**

OR

Define Goniometry. Discuss principles of Goniometry giving an example of shoulder joint. Describe various types of Goniometer.

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TERMINAL EXAMINATION 1ST YEAR BPT_h 2018-19

FUNDAMENTALS OF ELECTROTHERAPY

Total Duration: Section A+B = 3 hours

Date: 18/01/2019

Total Marks: 80

Instruction:

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-

SECTION – A SAQ (50 Marks)

Q. A. Short Answer Question. (Any five out of six)

(3x5=15)

1. Define Fuse and explain its working.
2. State Ohm's Law
3. Define Piezo electric effect
4. Discuss importance of Earthing.
5. Enumerate factors affecting skin resistance.
6. Enumerate the laws governing radiation.

Q.B. Short Answer Question. (Any five out of six)

(7x5=35)

1. Describe electric shock, its type and causes.
2. Describe the physiological effects of Ultrasound.
3. Explain the types and functions of transformers.
4. Define TENS. Write down its types.
5. Describe Ultraviolet Radiation production in High Pressure Mercury Vapour Burner with appropriate diagram.
6. Explain Therapeutic effects of Superficial Heat.

SECTION – A LAQ (30 Marks)

Q.C. Long Answer Question. (Any one out of two) (15x1=15)

1. Explain the production of SWD. Draw a neat labeled panel diagram of SWD. (8+7)
2. Describe the production of UVR. Draw its panel diagram. Also, write about the preparation of apparatus. (7+5+3)

Q.D. Long Answer Question. (Any one out of two) (15x1=15)

1. Define Specific Heat. Describe physiological effects of cryotherapy. Describe various methods of applying cryotherapy. (3+6+6)
2. Draw a panel diagram of therapeutic ultrasound and explain its production. Write a note on coupling media. (7+5+3)

-X-X-X-X-X-X-X-X-

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TERMINAL EXAMINATION 1ST YEAR BPT^h 2018-19

Biochemistry

Total Duration: Section A+B =2 hours

Date: 21/01/2019

Total Marks: 40

Instruction:

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 7. Use a common answer book for all Section.
-

A. Short Answer Question. (Any five out of six)

(5x3=15)

- B. Write functions and sources of vitamin E.
- C. Write in detail about Riboflavin.
- D. Write in detail factors affecting enzyme action.
- E. Write short note on Heteropolysaccharides.
- F. Diagnostic use of enzymes.
- G. What is glycogen? Give its structures and functions.

B. Answer the following question. (Any five out of six)

(5x5=25)

- A. Explain glycolysis with energetic. Draw and explain pathway in detail.
- B. What is enzyme inhibition? Describe in detail.
- C. Why are essential amino-acids called so? Enlist the essential and non-essentials amino-acids. Draw the structures of aromatic amino acids.
- D. What are the RDA, Biochemical significance & deficiency disorders for vitamin A? describe wald's visual cycle in detail.
- E. Write hormonal regulation of blood glucose level?

X-X-X-X-X-X-X-X

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TERMINAL EXAMINATION 1ST YEAR BPTth 2018-19

HUMAN ANATOMY

Total Duration: Section A+B = 3 hours

Date: 23/01/2019

Total Marks: 80

Instruction:

1. Use blue/black ball point pen only.
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 7. Use a common answer book for all Section.
-

SECTION – A SAQ (50 Marks)

Q. A. Short Answer Question. (Any five out of six)

(3x5=15)

1. Functions of skin.
2. Laws of ossification.
3. Types of Epiphysis with one example of each.
4. Name the arteries supplying a long bone.
5. Draw and label a diagram depicting the histology of skeletal muscle.
6. Classify cartilaginous joints with one example each.

Q.B. Short Answer Question. (Any five out of six)

(7x5=35)

1. Specify the superficial muscles of the forearm. Nerve supply and action of them.
2. Specify the attachments, nerve supply and action of triceps brachii muscle.
3. Specify the boundaries and content of axilla.
4. Write short note on flexor retinaculum and structure passing through it with the help of diagram.
5. Describe boundaries and content of cubital fossa.
6. Classify synovial joint.

SECTION –B LAQ (30 Marks)

Q.C. Long Answer Question.

(15x1=15)

Describe shoulder joint under the following headings

- a. Types and articulating surfaces (3)
- b. Ligaments (3)
- c. Rotator cuff muscles and relations (3)
- d. Movements and muscle producing (3)
- e. Applied anatomy (3)

Q.D. Answer Question. (Any one out of two)

(15x1=15)

1. Describe brachial Plexus under following heads.

- a. Formation of Brachial plexus along with its roots, trunks, division and cords. (5)
- b. Write note on Erb's paralysis and (5)
- c. Write note on Klumpke's paralysis. (5)

OR

2. Describe Median nerve under the following heads:

- a. Formation of Median nerve along with its root value. (3)
- b. Course and relation of Median nerve along with axillary artery in arm. (3)
- c. Course of Median nerve in forearm and hand and muscles supplying Median nerve in forearm and hand (3+3=6)
- d. Write notes on carpal tunnel syndrome. (3)

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PRELIMINARY EXAMINATION 1ST YEAR BPTb

(WINTER BATCH 2017-18)

BIOCHEMISTRY

Total Duration: 2 hours

Total Marks: 40

Date: 13/10/2018

Instruction:

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 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.
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7. Use a common answer book for **all** Section.

Q. 1. Short Answer Question. (Any Five out of Six)

(5x3=15)

1. Composition, occurrence & functions of homopolysaccharides.
2. Write short note on Gout.
3. Draw schematic representation of Urea Cycle.
4. Write functions of vitamin 'C'.
5. Define isoenzymes. Give its clinical importance.
6. Describe the functions of calcium.

Q. 2. Short Answer Question. (Any Five out of Six)

(5x5=25)

1. Define proteins, classify proteins depending on the function with suitable examples.
2. Write dietary sources, RDA, biochemical functions & deficiency manifestations of Vitamin A.
3. Biochemical Role of Riboflavin & Niacin.
4. What are liver function test & their clinical significance?
5. Explain glycogenesis & Glycogenolysis in detail.
6. Describe Glycolysis in detail with energetic.

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PRELIMINARY EXAMINATION 1ST YEAR BPTb

(WINTER BATCH 2017-18)

FUNDAMENTALS OF KINESIOLOGY & KINESIOTHERAPY

Total Duration: Section A+B = 3 hours

Total Marks: 80

Date: 08/10/2018

Instruction:

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 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** Section.

SECTION – A SAQ (50 Marks)

Q. A. Short Answer Question. (Any Five out of Six)

(5x3=15)

1. Uses of parallel bars.
2. Any 3 physical properties of water.
3. Types of equilibrium.
4. State Newton's 1st law with example.
5. Define Biomechanics & classify the same.
6. Write advantages of Relaxation.

Q. B. Short Answer Question. (Any Five out of Six)

(5x7=35)

1. Definition, principle, effects & uses of Passive movement.
2. Any 3 derived positions in standing with its uses & effects.
3. Define group exercise & Discuss merits and demerits of group exercises.
4. Write a note on types of muscle work.
5. Give the principles of Yoga. Describe and give the uses of 'Paschimottasan'.
6. Describe the effects of warm up & cool down phase of aerobic exercise program.

SECTION – B LAQ (30 Marks)

Q. C. Answer the following. (Any One out of Two)

(1x15=15)

a) Describe anatomical lever and explain its type with examples.

(5+10)

OR

b) Describe Axis and planes in detail with examples. Define angle of pull moment arm of a force and their importance.

(6+9=15)

Q. D. Long Answer question (Any One Out of Two)

(1x15=15)

a) Describe principles of Goniometry. Write different types of Goniometers. Describe in detail procedure of measuring ROM of shoulder joint movement.

(5+3+7)

OR

b) Describe principles of suspension. Describe suspension Apparatus in details. Add a note on uses of suspension.

(4+8+3)

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TILAK MAHARASHTRA VIDYAPEETH (TRUST)
LOKMANYA MEDICAL COLLEGE OF PHYSIOTHERAPY

Affiliated to MUHS

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Email ID: lokmanyamcop@gmail.com

PRELIMINARY EXAMINATION 1ST YEAR BPTH

(WINTER BATCH 2017-18)

HUMAN ANATOMY

Total Duration: Section A+B = 3 hours

Total Marks: 80

Date: 03/10/2018

Instruction:

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 an attempt to resort to unfair means.
3. **All** questions are **compulsory**.
4. The number to the **right** indicates **full** marks.
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7. Use a common answer book for **all** Section.

SECTION – A SAQ (50 Marks)

Q. 1. Write short Answer to the following Question. (Any Five out of Six) (5x3=15)

1. Enumerate the branches of arch of aorta.
2. Enumerate the support of uterus.
3. Name the muscles of mastication, Specify their nerve supply.
4. Carpal tunnel syndrome.
5. Draw and label a diagram depicting the histology of skeletal muscle.
6. Mention Boundaries and contents of Popliteal fossa.

Q. 2. Short Answer Question. (Any Five out of Six) (5x7=35)

1. Write short note on C.S.F.
2. Describe right coronary artery.
3. Describe superior & inferior Radio-ulnar joint.
4. Describe medial longitudinal arch.
5. Floor of fourth Ventricle.
6. Specify the commencement, course, branches and distribution of sciatic nerve.

SECTION – B LAQ (30 Marks)

Q. 3. Long answers the following. (Any One out of Two)

(1x15=15)

1) Describe the hip joint under the following heading.

A] Type & articular surface

B] Ligaments

C] Relations

D] Movements & muscle producing movements.

E] Applied aspects.

OR

2) Describe median Nerve under the following heading

A] Formation and root value

B] Course & Relation

C] Branches and distribution

D] Applied Anatomy

Q. 4. Write long answer to the following question (Any One Out of Two)

(1x15=15)

1) Describe the facial Nerve under the following heads:

i] Nuclei and functional components

ii] Course and Branches

iii] Write Notes on Bell's Palsy

OR

2) Describe cerebellum under the following headings.

A] Subdivision, lobes & fissure

B] Connections

C] Function

D] Applied Anatomy

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PRELIMINARY EXAMINATION 1st YEAR BPTH 2017-18
FUNDAMENTALS OF KINESIOLOGY & KINESIOTHEAPY

Total Duration: Section A+B = 3 hours

Total Marks: 80
Date: 13/04/2018

- Instruction:**
- 1) Use **blue/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 answer book for **all** Section.

SECTION – A SAQ (50 Marks)

Q. A Short Answer Question. (Any Five out of Six)

(5x3 = 15)

1. Tadasana.
2. Enumerate 5 components of Physical fitness.
3. Prone Kneeling.
4. Write a note on Passive insufficiency of a muscle.
5. Uses of parallel bars.
6. Advantage of relaxation.

Q. B Short Answer Question. (Any Five out of Six)

(5x7 = 35)

1. Describe indications and contraindication of hydrotherapy.
2. Passive movements – Definition, Principles & Uses.
3. Write in details about Components of aerobic exercises program.
4. Describe trikonasana & its uses.
5. Describe classification of massage manipulations.
6. Define group exercise & Discuss merits, demerits of group exercises.

SECTION – B LAQ (30 Marks)

Q. C Answer the following. (Any One out of Two)

(1 x 15 = 15)

- a. Describe Anatomical lever and explain its types with example.

(5 + 10)

OR

- b. Describe fundamental standing position with its muscle work and effects and uses.

(8 + 7)

Q. D Long Answer question (Any One out of Two)

(1 x 15 = 15)

- a. Classify suspension therapy. Mention different accessories used in suspension therapy. Write its effects and uses.

(4 + 4 + 7)

OR

- b. Describe Axes and planes in detail with examples. Define angle of pull, moment arm of a force and their importance.

(6 + 9 = 15)

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Plas check

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PRELIMINARY EXAMINATION 1st YEAR BPTH 2017-18

HUMAN PHYSIOLOGY

Total Duration : Section A+B = 3 hours

Total Marks: 80

Date: 12/04/2018

- Instruction:**
- 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** Section.

SECTION –A (50 Marks)

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

(3 x 5 =15)

- a) Plasma Proteins
- b) Functions of WBC
- c) Puberty.
- d) Factors affecting GFR
- e) Metabolic functions of liver
- f) Myopia

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

(7 x 5=35)

1. What are the effects of training on cardio-respiratory system?
2. Describe the role of oxygen in the regulation off respiration.
3. Define cardiac output. What are the factors affecting cardiac output?
4. Describe the properties of skeletal muscle.
5. Describe the functions of cerebellum.
6. Resting membrane potential

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SECTION – B (30 Marks)

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

(1x15 =15)

- a) Define sarcomere. Explain the molecular basis of muscle contraction. Add a note on rigor mortis.
- b) Describe in details nervous regulation of respiration

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

(1x15 =15)

- a) Define and draw a well label diagram of ECG in Lead-II. Explain the significance of various waves in ECG
- b) Classify the descending tracts in spinal cord. Describe cortico spinal tracts in detail. Add a note on difference between upper motor neuron lesion and lower motor neuron lesion.

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PRELIMINARY EXAMINATION 1st YEAR BPTH 2017-18
FUNDAMENTALS OF ELECTROTHERAPY

Total Duration: Section A+B = 3 hours

Total Marks: 80
Date: 10/04/2018

Instruction:

- 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** Section.

SECTION – A SAQ (50 Marks)

Q. A Short Answer Question (Any Five out of Six)

(5 x 3 = 15)

1. State Ohm's law.
2. Write Principle of Interferential therapy.
3. Explain Lewis hunting Reaction.
4. Write Indications & contraindications of contrase bath.
5. Explain physiological effects of whirl pool bath.
6. Describe characteristics of laser.

Q. B Short Answer question. (Any Five out of Six)

(5 x 7 = 35)

1. Differentiate between Faradic & Galvanic Current.
2. Enlist the functions of Transformers. Describe the types of transformers.
3. Describe the Kromayer lamp.
4. Define TENS. Write down its type.
5. Describe indications & contraindications of IR.
6. Describe production of Ultrasound.

PTO

SECTION – B LAQ (30 Marks)

- Q. C** 1. Describe construction and working of high pressure mercury vapor burner lamp. With labeled diagram. Write note Indications & contraindications of UVR. (15 marks)

OR

2. Describe various methods of heat transfer. Describe physiological effects of Hydrocollateral Pack. Describe the construction of Hydrocollateral Pack. (15 marks)

- Q. D** 1. Describe SWD Circuit diagram & production write note on types of electrodes and explain methods of testing. (15 marks)

OR

2. Describe physiological effects of cryotherapy. Describe various methods of applying cryotherapy. (15 marks)

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PRELIMINARY EXAMINATION 1st YEAR BPTH 2017-18
HUMAN ANATOMY

Total Duration : Section A+B = 3 hours

Total Marks: 80

Date: 09/04/2018

- Instruction:**
- 1) Use **blue/black** ball point pen **only**.
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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** Section.

SECTION – A SAQ (50 Marks)

Q.1 Write short answers to the following (any five out of six) (5x3=15)

- a. Enumerate the arteries supplying stomach.
- b. Enumerate the branches of arch of Aorta.
- c. Enumerate the Extra ocular muscles supplied by oculomotor nerve.
- d. Enumerate support of uterus.
- e. Histology of the cardiac muscle.
- f. Specify the posterior relations of the kidney.

Q.2 Write short answers to the following (any five out of six) (5x7=35)

- a. Specify the commencement, course, branches and distribution of sciatic nerve.
- b. Describe the rotator cuff muscles.
- c. Draw and label transverse section of medulla at the level of pyramidal decussation.

PTO

- d. Write a note on cubital fossa.
- e. Write note on bronchopulmonary segment of right lung.
- f. Describe locking and unlocking of knee joint.

SECTION – B LAQ (30 Marks)

Q. 3 Write long answers to the following. (Any one out of two) (1x15=15)

- I) Describe shoulder joint under the following headings.
 - a. Type of joint and articular structure. (02)
 - b. Ligaments. (03)
 - c. Relations. (03)
 - d. Movements and muscles producing them. (05)
 - e. Applied anatomy. (02)

- II) Describe cerebellum under the following headings.
 - a. Subdivision, lobes & fissures. (03)
 - b. Connections. (06)
 - c. Function. (03)
 - d. Applied anatomy. (03)

Q 4 Write long answers to the following (any one out of two) (1x15=15)

- I) Discuss the cerebral hemisphere under following headings.
 - a. Lobes & poles. (03)
 - b. Sulci, gyri & functional areas of superolateral surface. (06)
 - c. Add note on circle of willis and draw label diagram. (06)

- II) Describe the facial nerve under the following headings:
 - a) Functional components & nuclei. (03)
 - b) Course & Relations. (04)
 - c) Branches & Distribution. (04)
 - d) Clinical anatomy. (04)

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PRELIMINARY EXAMINATION 1st YEAR BPTH 2017-18
BIOCHEMISTRY

Total Duration: 2 hours

Total Marks: 40

Date: 07/04/2018

- Instruction:**
- 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.
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 - 7) Use a common answer book for **all** Section.

Q.1 Short answer questions (Any Five out of Six)

(5X3=15)

- a) Functions of Phospholipids
- b) Role of fibers in diet
- c) Heteropolysaccharides: composition, occurrence and significance
- d) Regulation of plasma calcium
- e) Mechanism of action of Steroid hormones
- f) Formation and detoxification of Ammonia

Q.2 Short answer questions (Any Five out of Six)

(5X5=25)

- a) Biochemical role of Riboflavin and Niacin
- b) Name ketone bodies. Describe ketogenesis and related conditions.
- c) Isoenzymes of LDH and their clinical significance.
- d) Write about chemistry, Recommend Daily Allowance, sources, functions and deficiency disorders of Vitamin A.
- e) Describe the biochemical events in muscle contraction.
- f) What are liver function tests and their clinical significance?

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TERMINAL EXAMINATION

1st YEAR BPTH 2017-18

FUNDAMENTALS OF KINESIOLOGY & KINESIOTHEAPY

Total Duration: Section A+B = 3 hours

Total Marks: 80

Date: 03/01/2018

- Instruction:**
- 1) Use **blue/black** ball point pen **only**.
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 - 7) Use a common answer book for **all** Section.

SECTION – A SAQ (50 Marks)

Q. 1 Answer the following. (Any Five out of Six)

(5x3 = 15)

- 1) Define centre of gravity, base of support & equilibrium.
- 2) Enumerate cardinal Axes & planes.
- 3) Rages of muscle work.
- 4) Write an note on Angle of pull.
- 5) Write an note on Movable pulley
- 6) State Newton's second law with example.

Q. 2 Short Answer question. (Any Five out of Six)

(5x7 = 35)

- 1) Note on type of muscle work & add an note on passive insufficiency.
- 2) Write note on Vertical suspension.

- 3) Define force & torque. Write composition & resolution of forces with appropriate examples.
- 4) Open & close kinematic exercises.
- 5) Describe classification of movements with example.
- 6) Define Biomechanics & classify the same.

SECTION – B LAQ (30 Marks)

Q. 3 Long answer question (Any one out of two)

(1x15 = 15)

- a) Define a lever. Which are different types of levers. Write in detail about all types of levers in human body with respect to mechanical advantage.
- b) Define massage. Describe classification of massage manipulation. Add a note on Physiological & therapeutic effects of massage.

Q. 4 Long answer question (Any one out of two)

(1x15 = 15)

- a. Define Goniometry. Discuss principles of goniometry giving an example of elbow joint. Describe types of goniometry.
- b. Write in detail classification of passive movements Describe in detail principles of relaxed passive movements. Add note on effects & uses.

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TERMINAL EXAMINATION
1st YEAR BPTH 2017-18
HUMAN PHYSIOLOGY

Total Duration: Section A+B = 3 hours

Total Marks: 80

Date: 17/01/2018

- Instruction:**
- 1) Use **blue/black** ball point pen **only**.
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 - 3) **All** questions are **compulsory**.
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 - 7) Use a common answer book for **all** Section.

SECTION – A SAQ (50 Marks)

Q. 1 Short answer question. (Any Five out of Six)

(3 x 5 = 15)

- a) Rh blood group.
- b) Functions of bile juice
- c) Define hypoxia. Enlist types of hypoxia, Explain effect of hypoxia on body.
- d) Functions of middle ear.
- e) Milk let down reflex.
- f) Errors of refraction.

Q. 2 Short answer question. (Any Five out of Six)

(7 x 5 = 35)

- a) Classify and describe properties of receptors.
- b) Volume and capacities of lungs. Add a note on timed vital capacity.
- c) Describe composition and functions of gastric juice.

- d) Draw neat and labelled diagram of oxygen hemoglobin dissociation curve.
Discuss factors causing its shift to right.
- e) Explain process of erythropoiesis & factors regulating it.
- f) Describe action, regulation and disorders of growth hormone.

SECTION – B SAQ (30 Marks)

Q. 3 Long answer question. (Any One)

(15 Marks)

- a) Define action potential. Draw a well labelled diagram of action potential in nerve fiber and describe its ionic basis.
- b) Define & classify synapse. Explain synaptic transmission and various properties of synapse.

Q. 4 Long answer question. (Any One)

(15 Marks)

- a) Describe neural regulation of respiration.
- b) Define GFR. Describe factors affecting GFR.

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TERMINAL EXAMINATION

1st YEAR BPTH 2017-18

BIOCHEMISTRY

Total Duration: 2 hours

Total Marks: 40

Date: 16/01/2018

Instruction:

- 1) Use **blue/black** ball point pen **only**.
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- 3) **All** questions are **compulsory**.
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- 7) Use a common answer book for **all** Section.

Q. 1 Short answer questions. (Any Five out of Six)

(5X3=15)

- a) Functional classification of Proteins.
- b) Lipoproteins.
- c) Composition , occurrence and functions of heteropoly saccharides.
- d) Rhodopsin cycle.
- e) Mechanism of action of peptide hormone.
- f) Oxidative phosphorylation.

Q.2 Short answer questions (Any Five out of Six)

(5X5=25)

- a) Describe urea cycle with related disorders.
- b) Explain Glycogenesis and Glycogenolysis with regulation.
- c) Factors affecting enzyme action
- d) Write about chemistry, RDA, sources, functions and deficiency disorders of Vitamin D.
- e) Describe functions and deficiency disorders of Thiamine
- f) Electron transport Chain (ETC)

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**Plot No. 3, Sector 14, Near Raghunath Vihar,
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TERMINAL EXAMINATION
1st YEAR BPTH 2017-18
HUMAN ANATOMY

Total Duration: Section A+B = 3 hours

Total Marks: 80

Date: 15/01/2018

- Instruction:**
- 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**.
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 - 7) Use a common answer book for **all** Section.

SECTION – A SAQ (50 Marks)

Q.1 Write short answers to the following (any five out of six) **(5x3=15)**

- a) Name the arteries supplying a long bone.
- b) State attachment, nerve supply and actions of Triceps brachii.
- c) Boundaries and contents of adductor canal.
- d) Enumerate muscles supplied by femoral nerve .
- e) Carpal tunnel syndrome.
- f) Enumerate branches of Axillary artery.

Q.2 Write short answers to the following (any five out of six) **(5x7=35)**

- a) Specify the attachments, nerve supply and actions of hamstring muscles.
- b) Describe superior and inferior radio-ulnar joint.
- c) Specify boundaries and contents of femoral triangle.

- d) Explain the anatomical basis of deformity produced in Erb's paralysis.
- e) Describe great saphenous vein.
- f) Specify nerve supply and actions of interossei of hand.

SECTION – B LAQ (30 Marks)

Q. 3 Write long answers to the following. (any one out of two)

(1x15=15)

- I) Describe the medial longitudinal arch of foot under the following headings:
 - a) Formation. (3)
 - b) Factors responsible for maintenance. (6)
 - c) Functions. (3)
 - d) Clinical aspects. (3)

- II) Describe the knee joint under the following headings:
 - a) Type & articular surfaces. (2)
 - b) Ligaments. (2)
 - c) Relations. (3)
 - d) Movements & muscles producing movements. (5)
 - e) Applied aspects. (3)

Q 4 Write long answers to the following (any one out of two)

(1x15=15)

- I) Describe the radial nerve under the following headings:
 - a) Formation and root value. (2)
 - b) Course and relations. (3)
 - c) branches and distribution. (7)
 - d) Applied anatomy. (3)

- II) Describe the wrist joint under the following headings:
 - a) Type & articular surfaces. (2)
 - b) Ligaments. (2)
 - c) Relations. (4)
 - d) Movements & muscles producing movements. (5)
 - e) Applied aspects. (2)

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LOKMANYA MEDICAL COLLEGE OF PHYSIOTHERAPY

Affiliated to MUHS

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Kharghar, Navi Mumbai - 410210.

TERMINAL EXAMINATION
1st YEAR BPTH 2017-18
FUNDAMENTALS OF ELECTROTHERAPY

Total Duration : Section A+B = 3 hours

Total Marks: 80

Date: 04/01/2018

- Instruction:**
- 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** Section.

SECTION - A SAQ (50 Marks)

- Q.1 Short Answers question. (Any Five out of Six) (5x3=15)**
1. Cosine Law.
 2. Capacitance.
 3. Define latent heat.
 4. Joule's law.
 5. Lenz's law.
 6. Fuse.
- Q. 2 Short answer question (Any Five out of Six) (5x7=35)**
1. Modes of heat transfer.
 2. Write a note on Electric Shock.
 3. Contraindications and indication of ultrasound.

4. Discuss Luminous and non luminous generators in Intra Red.
5. Physiological effects of heat.
6. Sources of Intra Red radiations.

SECTION - B LAQ (30 Marks)

Q. 3 Long answers question (Any one of Two)

(1x15=15)

- a) Draw a heat labelled panel diagram of SWD. Write in detail the construction and production of SWD.
- b) Write down the physiological effects of cryotherapy. Explain methods of applications of cryotherapy. Also write down the contraindications of cryotherapy.

Q.4 Long answers question (any one out of two)

(1x15=15)

- a. Explain in detail about paraffin wax bath. Write down the various methods of applications of PWB. Add a note on its contraindications.
- b. Draw a panel diagram of therapeutic ultra sound and explain its production. Add a note on coupling media.

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