

Institute of Applied Medicines & Research

COURSE: BPT 1st YEAR

SUBJECT: ANATOMY

PAPER CODE: BPT-101

9th KM Stone, NH-58, Delhi-Meerut Road, Ghaziabad- 201206 (U.P.)

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LIST OF PRACTICALS

1. Identification and description of all anatomical structures.
2. The learning of anatomy is by demonstration only through dissected parts, slides, models, charts, etc .
3. Demonstration of dissected parts (upper extremity parts , lower extremity ,thoracic and abdominal viscera face , brain)
4. Demonstration of skeleton- articulated and disarticulated.
5. During the training more emphasis will be given on the study of bones, muscles, joints ,nerve supply, of the limbs and arteries of limbs.
6. Surface anatomy:
 - Surface land mark- bony, muscular, and ligamentous
 - Surface anatomy of major nerves, arteries of the limbs,
7. Points of palpation of nerves and arteries.

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PRACTICAL NO.1

AIM- Identification and description of all anatomical structures.

REQUIREMENTS:

MATERIALS

.BONES

.ORGAN MODEL

PRINCIPLE: Learning side determination, site of muscle origin and insertion.

PROCEDURE: bones were showed to the students and side determination was indentified and muscle origin and insertion was marked and displayed to students of humerus, scapula, femur, etc.

RESULT: At the end of practical, students learned how to identify bones of right and left and learned muscle origin and insertion.

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PRACTICAL NO.2

AIM - The learning of anatomy is by demonstration only through dissected parts, slides, models, charts, etc .

REQUIREMENTS:

MATERIAL -

Anatomical Charts of various areas of body

Model bones display

PRINCIPLE- learning about structures inside the bone

PROCEDURE- Various bones in form of charts and slides were shown to students.

RESULT: At the end of practical, students learned the names and about the structure associated with it

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PRACTICAL NO.3

AIM- Demonstration of dissected parts (upper extremity parts, lower extremity ,thoracic and Abdominal viscera face , brain)

REQUIREMENTS :

MATERIAL –

Dissected parts of upper extremity, lower extremity, thoracic and abdominal viscera, face and brain

PRINCIPLE - Learning about anatomy of dissected parts like thorax, brain, spine,etc

PROCEDURE- Dissected parts of various structures were shown to students

RESULT- At the end of practical, students were fully confident about naming different dissected parts and learned about them.

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PRACTICAL NO.4

AIM- Demonstration of skeleton- articulated and disarticulated.

REQUIREMENTS:

MATERIAL –

Human skeleton

PRINCIPLE- Learning about the joints in human body and individual bones

PROCEDURE- Human skeleton was shown to students, brief about joints and individual bone was given to students with specific site marking

RESULT- at the end of practical, students got information about joints and individual structures and learned them

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PRACTICAL NO.5

AIM- During the training more emphasis will be given on the study of bones , muscles, joints ,nerve supply, of the limbs and arteries of limbs.

REQUIREMENT:

MATERIAL –

Bone set of upper limb and lower limb

Charts of nerve supply, arteries of limb

Joint models

PRINCIPLE- deep learning of nerve supply, arteries, muscles, joints, bones of body

PROCEDURE – bone set of upper and lower limb was displayed in fronts of students, nerve supply, arteries were displayed in front of students.

RESULT- At the end of practical, students learned about nerve supply, arterial supply, muscles and joints.

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PRACTICAL NO.6

AIM- Surface anatomy:

- Surface land mark- bony, muscular, and ligaments.
- Surface anatomy of major nerves, arteries of the limbs.

REQUIREMENT:

MATERIAL-

Human skeleton

PRINCIPLE- learning about surface land marking of bone, muscle and ligament attachment, nerve supply and arterial supply

PROCEDURE- Human skeleton was marked with muscular and ligamentous attachment, nerve supply and arterial supply and displayed in front of students.

RESULT- At the end of practical, student learned about surface landmark of human body

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PRACTICAL NO.7

AIM- Points of palpation of nerves and arteries.

REQUIREMENT:

MATERIAL –

.HUMAN SKELETON

PRINCIPLE- Learning about points of palpation of nerves and arteries

PROCEDURE- Human skeleton was displayed in front of students, points of palpation of nerves and arteries were marked throughout the body.

RESULT- At the end of practical, students fully learns about the points.

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COURSE: BPT 1ST YEAR

SUBJECT: PHYSIOLOGY

PAPER CODE: BPT-102

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LIST OF PRACTICALS

1. Examination of pulse, BP, Respiratory rate.
2. Reflexes.
3. Spirometry to measure various lung capacities and volumes, respiratory rate, tidal volume, IRV, IC, ERV, EC, Residual volume on spirometry.
4. Estimate of haemoglobin, RBC, WBC, TLC, DLC, ESR count.
5. Blood grouping, bleeding, and clotting time.

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PRACTICAL NO.1

AIM- Examination of pulse, BP, Respiratory rate.

REQUIREMENT:

MATERIAL-

Sphygmomanometer

Stethoscope

AIM- To learn how to measure BP, pulse, respiratory rate

PRINCIPLE- learning about the key points of BP instruments & Stethoscope.

PROCEDURE- Students were taught how to check pulse at wrist level by palpation, how to measure bp using cuff and stethoscope.

RESULT- at the end of practical students learns to measure BP, pulse, respiratory rate & their normal values.

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PRACTICAL NO.2

AIM- Testing of Reflexes.

REQUIREMENT:

MATERIAL-

Hammer

AIM- To learn how to check Reflexes

PRINCIPLE- learning about the various Reflexes- triceps jerk, deep tendon reflexes.

PROCEDURE- Students were taught how to check Reflexes by using Hammer at various levels.

RESULT- at the end of practical students learns how to check Reflexes

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PRACTICAL NO.3

AIM- How to measure various lung capacities and volumes, respiratory rate, tidal volume, IRV, IC, ERV, EC, Residual volume.

REQUIREMENT:

MATERIAL-

Spirometer

AIM- To learn how to use Spirometer for checking lung capacities and volumes, respiratory rate, tidal volume, IRV, IC, ERV, EC, Residual volume.

PRINCIPLE- learning about the various aspects of Spirometer.

PROCEDURE- Students were taught how to use Spirometer in Inspiration & Expiration, various capacities and volumes, respiratory rate, tidal volume, IRV, IC, ERV, EC, Residual volume.

RESULT- at the end of practical students learns how use spirometry & normal lungs volumes & capacities.

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PRACTICAL NO.4

AIM- How to estimate of hemoglobin, RBC, WBC, TLC, DLC, ESR count.

REQUIREMENT:

MATERIAL-

Hemoglobin meter,

Test tube,

Anticoagulant

Microscope

Haemocytometer

ESR Meter

AIM- To learn how to measure- hemoglobin, RBC, WBC, TLC, DLC, ESR count

PRINCIPLE- learning about the various aspects of blood.

PROCEDURE- Students were taught how to estimate of hemoglobin, RBC, WBC, TLC, DLC, ESR count by help of microscope, Hemoglobin meter etc.

RESULT- at the end of practical students learns how normal values of hemoglobin, RBC, WBC, TLC, DLC, ESR count

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PRACTICAL NO.5

AIM- How to identify Blood grouping & measure bleeding and clotting time.

REQUIREMENT:

MATERIAL-

Hemoglobin meter,

Test tube, Slides

Anticoagulant

Microscope

Anti A, Anti B & Anti AB Reagents

Automated Blood Grouping Instrument

Blood group test kit

AIM- To learn how to measure bleeding and clotting time & identify Blood grouping

PRINCIPLE- learning about the various Blood Groups & details of bleeding and clotting time.

PROCEDURE- Students were taught how to measure bleeding and clotting time & identify the various Blood Groups by using instruments.

RESULT- at the end of practical students learns how to do Blood Grouping & normal values of bleeding and clotting time

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COURSE: BPT 2nd YEAR

SUBJECT: BIOMECHANICS & KINESIOLOGY

PAPER CODE: BPT-201

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LIST OF PRACTICALS

1. Goniometry- measurement of joint ROM.
2. Identify muscle work of various movements in body at different angle.
3. Identify normal and abnormal posture.
4. Normal gait with it parameters and identify abnormal gait with the problems in it.

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PRACTICAL NO.1

AIM - Goniometry- measurement of joint ROM

REQUIREMENTS :

MATERIAL -

Couch

Goniometer

PRINCIPLE- learning about how to measure ranges of various joint like shoulder, elbow, wrist, etc.

PROCEDURE- students were detailed about normal ranges of each joint and they checked it by using goniometer in different positions for every upper and lower limb joints.

RESULT: At the end of practical, students learned the normal range for every joint and how to check it.

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PRACTICAL NO.3

AIM - Identify normal and abnormal posture.

REQUIREMENTS:

MATERIAL -

Posture charts

PRINCIPLE- learning how Identify normal posture and abnormal posture, for checking alignment of various joint and bony structure, abnormal posture or deviation from normal can lead to misalignment which effects body's normal functioning.

PROCEDURE- Students were detailed about posture details like types of posture, they were given brief about normal alignment of ear, shoulder level, ASIS level, etc. and problems arising due to misalignment were showed in slides.

RESULT: At the end of practical, students learned normal and abnormal alignment of posture

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PRACTICAL NO.2

AIM - . Identify muscle work of various movements in body at different angle

REQUIREMENTS :

MATERIAL -

Muscle chart and slides

Couch

Skeleton

PRINCIPLE- learning how Identify muscle work of various movements like flexion, Extension, adduction, abduction, etc at different angle of 45 degree, 90 degree, 120 degree,

PROCEDURE- students were detailed about muscle work of various muscles like flexors, extensors, for upper and lower limb , slides were displayed in front of students and by marking in skeleton they got brief and then practiced it in groups.

RESULT: At the end of practical, students learned muscle work of various movements in body at different angle

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PRACTICAL NO.4

AIM: Normal gait with its parameters and identify abnormal gait with the problems in it.

REQUIREMENTS:

MATERIAL -

Surface marking on floor

Gait Analyzer Videos

Gait Analyzer

PRINCIPLE- learning about normal Gait patterns its parameters & abnormal gait pattern.

PROCEDURE- Surface marking was done on floor and students were demonstrated normal Gait pattern through walking over the marked points and abnormal gait pattern due to muscle weakness in lower limb muscles.

RESULT: At the end of practical, students learned about normal & abnormal Gait patterns & variation in the parameters

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COURSE: BPT 2nd YEAR AND 3rd YEAR

SUBJECT: EXERCISE THERAPY

PAPER CODE: BPT-202, 301

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EXERCISE THERAPY -1

PRACTICAL

1. Starting positions and derived positions.
2. Range of motion (PROM, AROM, AAROM) exercises to all joints,
3. Measurement of joint range using goniometry
4. General and local relaxation techniques.
5. Suspension Exercise to all major joints
6. Massage – upper limb, lower limb, back, face
7. Manual muscle testing of individual muscles
8. Coordination exercises, balancing exercises.
9. Joint Mobilization to individual joint
10. Stretching of individual and group muscles.
11. Resisted exercises to individual and group muscles, open, and closed kinematic exercises.
12. PNF patterns to upper and lower limb.
13. Various types breathing exercises, chest mobilization exercises, postural drainage.
14. Gait training with various walking a

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PRACTICAL NO.1

AIM: Starting positions and derived positions.

REQUIREMENTS:

MATERIAL -

Couch

Hanging Bar

Chairs

PRINCIPLE- learning about Starting positions and derived positions.

PROCEDURE- Students were demonstrated various Starting positions and their alteration by position of arm, leg & trunk.

RESULT: At the end of practical, students learned about Starting positions and derived positions.

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PRACTICAL NO.2

AIM: Range of motion (PROM, AROM, and AAROM) exercises to all joints.

REQUIREMENTS:

MATERIAL -

Couch

Stepper

Pillows

PRINCIPLE- learning about Normal range of motion of different joints. & also learn about the active passive & assisted range of motion.

PROCEDURE- Demonstrate various range of motion likes active passive & assisted range of motion & students practice in a groups.

RESULT: At the end of practical, students learned Active range of motion (AROM), Passive range of motion (PROM) & Active Assisted range of motion (AAROM).

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PRACTICAL NO.6

AIM: Massage – upper limb, lower limb, back, face

REQUIREMENTS:

MATERIAL –

Couch

Stepper

Pillows

Powder

Oil

PRINCIPLE- learning how to give Soft Tissue Manipulation of different parts of the body.

PROCEDURE- Demonstrate various Soft Tissue Manipulation techniques for different parts of the body- upper limb, lower limb, back & face

RESULT: At the end of practical, students learned about various Soft Tissue Manipulation techniques for different parts of the body- upper limb, lower limb, back & face.

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PRACTICAL NO.7

AIM: Manual muscle testing of individual muscles

REQUIREMENTS:

MATERIAL –

Couch

Stepper

Pillows

PRINCIPLE- learning how to check strength of various upper limbs, lower limb & trunk muscles manually.

PROCEDURE- Demonstrate how to check strength of various upper limbs, lower limb & trunk muscles by applying varying resistance and briefing of various grades of strength of muscle.

RESULT: At the end of practical, students learned about how to check muscle strength.

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PRACTICAL NO.8

AIM: Manual muscle testing of individual muscles

REQUIREMENTS:

MATERIAL –

Couch

Balance Board

Marked point

Parallel lines on the surface

Pack board

Uneven surfaces, form mattress

Trampoline

PRINCIPLE- learning how to check how to check co-ordination & balance by using different tasks.

PROCEDURE- Demonstrate how to check co-ordination & balance vai walking on different surfaces, using of parallel bars, foam mattress, trampoline, pack board, marked point.

RESULT: At the end of practical, students learned about how to how to check co-ordination & balance of an individuals.

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PRACTICAL NO.9

AIM: Joint Mobilization to individual joint.

REQUIREMENTS:

MATERIAL -

Couch

Stepper

Pillows

PRINCIPLE- learning about joint Mobilization techniques to individual joint

PROCEDURE- Demonstrate various joint Mobilization techniques to individual joints.

RESULT: At the end of practical, students learned about joint Mobilization techniques to individual joints.

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PRACTICAL NO.10

AIM: Stretching of individual and group muscles.

REQUIREMENTS:

MATERIAL -

Couch

Stepper

Pillows

PRINCIPLE- learning about Stretching of individual and group muscles

PROCEDURE- Demonstrate various Stretching techniques of individual and group muscles.

RESULT: At the end of practical, students learned about various Stretching techniques of individual and group muscles

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PRACTICAL NO.11

AIM: Resisted exercises to individual and group muscles, open, and closed kinematic exercises.

REQUIREMENTS:

MATERIAL -

Couch

Stepper

Pillows

PRINCIPLE- learning about Resisted exercises to individual and group muscles, open, and closed kinematic exercises

PROCEDURE- Demonstrate various Resisted exercises to individual and group muscles, open, and closed kinematic exercises

RESULT: At the end of practical, students learned about Resisted exercises to individual and group muscles, open, and closed kinematic exercises

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PRACTICAL NO.12

AIM: PNF patterns to upper and lower limb.

REQUIREMENTS:

MATERIAL -

Couch

Stepper

Pillows

PRINCIPLE- learning about PNF patterns to upper and lower limb.

PROCEDURE- Demonstrate various PNF patterns to upper and lower limb.

RESULT: At the end of practical, students learned about PNF patterns to upper and lower limb.

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PRACTICAL NO.13

AIM: Various types breathing exercises, chest mobilization exercises postural drainage.

REQUIREMENTS:

MATERIAL -

Couch

Stepper

Pillows

PRINCIPLE- learning about various types breathing exercises, chest mobilization exercises postural drainage

PROCEDURE- Demonstrate various types breathing exercises, chest mobilization exercises postural drainage

RESULT: At the end of practical, students learned about various types breathing exercises, chest mobilization exercises postural drainage

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PRACTICAL NO.14

AIM: Gait training with various walking aids

REQUIREMENTS:

MATERIAL -

Couch

Parallel bars

PRINCIPLE- learning about Gait training with various walking aids

PROCEDURE- Demonstrate various Gait patters & using of various walking aids.

RESULT: At the end of practical, students learned about various Gait patters & using of various walking aids

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