AL-ALEEM MEDICAL COLLEGE LAHORE

DEPARTMENT OF ANATOMY

Welcome to Anatomy Department

STUDY GUIDE – 2nd Year MBBS

CONTENT

Syllabus

Gross Anatomy

- Head & Neck – 13 weeks
  (SGD, Dissection, Models & Videos, PBL and Integrated Clinical Lectures)
- Abdomen Pelvis – 13 weeks
  (SGD, Dissection, Models & Videos, PBL and Integrated Clinical Lectures)
- Neuroanatomy – 08 weeks
  (SGD, Dissection, Models & Videos¸ PBL and Integrated Clinical Lectures)
- **Special Histology**
  (Lectures & Practical)
- **Special Embryology**
  (Lectures)
- Islamiat
- Pakistan Studies

Recommended Books (Latest Editions)

- Clinical oriented anatomy by Keith L Moore
- Cunningham's manual of practical anatomy by G.J romance vol.1,2,3
- Developing human clinically oriented embryology by KLM
- Medical histology by Laiq Hussain
- Neuroamatomy by snell
- General anatomy by Tassaduq
- Di-fiore atlas of histology
- Netter's atlas Gray's anatomy by Susan standring
- Clinical anatomy by R.J. Last
- Wheater functional histology
- Grant's atlas of Anatomy
- Clinical anatomy by Snell
- Basic histology text & atlas by Junqueira

Stationary & Other

1. Practical histology copies by Prof. Tassaduq Hussain
2. Sketch book =03 (One for each gross anatomy region)
3. Hematoxylin and eosin pencil

4. Color box
5. Lead pencils
6. Ruler
7. Eraser
8. Sharpener
9. Dissection box
10. Latex Gloves and Goggles for dissection
11. White coat (full sleeves, knee length) = 03 per person

ACTIVITIES

- Special Histology Interactive Lectures
- Special Embryology Interactive Lectures
- Neuroanatomy Interactive Lectures
- Gross Anatomy
  (All lectures in Lecture Theatre 2)
- 2 PBL per academic sessions

Practical

- Dissection of head & neck and abdomen pelvis and brain in dissection hall
- Histology practical in histology laboratory
- Tutorials in small group discussion room
- Demonstrations

SYLLABUS, ToS & OSPE

M.B.B.S.

FIRST PROFESSIONAL

PART-II

ANATOMY INCLUDING HISTOLOGY

"NEURO AND GROSS ANATOMY"

The study of gross anatomy must lay emphasis on applied anatomy as related to clinical medicine and surgery. For teaching, actual dissection of cadaver, dissected specimens, models, and computer aided programs shall be used. Normal images of different diagnosis techniques i.e. X-rays and CT scans, MRI and Ultra-sonography shall also be introduced.

The time for dissection of the cadaver for each region is as under:

1. **Neuroanatomy including Brain and Spinal cord 09 weeks**
2. **Head and Neck 13 weeks**
3. **Abdomen and Pelvis 13 weeks**

NEUROANATOMY COURSE OBJECTIVES

After the end of the course, the students are able to:

1. Define, enumerate and describe the structure and functions of receptors.
2. Define and describe motor end plates and their functions.
3. Understand and describe the meninges of brain and spinal cord.
4. Describe subdural and subarachnoid spaces including subarachnoid cisterns.
5. Understand and describe internal structure of spinal cord at different levels:
6. Understand and describe ascending and descending tracts of spinal cord, their functions and effects of their lesions.
7. Understand and describe internal structure of medulla oblongata.
8. Comprehend and describe the internal structure of pons.
9. Understand and describe internal structure of mid brain.
10. Comprehend and describe the surfaces of cerebral hemisphere, its lobes, their sulci and gyri.
11. Locate, identify and describe functions of different functional areas of the brain.
12. Locate, identify and describe different types of projection and association fibres of brain and their functions.
13. Identify, locate and describe hypothalamus, its nuclei and their connection and functions.
14. Identify, locate and describe thalamus, its nuclei and their connection and functions.
15. Identify, locate and describe metathalamus and its connections and functions.
16. Understand and describe the ventricular system of the brain.
17. Comprehend and describe production and circulation of CSF and clinical conditions associated with it.
18. Comprehend, describe and discuss blood supply of the brain and spinal cord and

20. Identify, locate and describe cranial nerves nuclei and their connection and functions.
21. Understand and describe different lobes of cerebellum, its white and grey substances including the deep cerebellar nuclei.
22. Understand afferent and efferent connections of cerebellum and correlated these to its functions.
23. Understand and describe the signs and symptoms of cerebellum disease with logical explanation.
24. **Understand and describe clinical conditions related to nervous system.**
25. Comprehend and understand neuroanatomical basis of the following:
    a) Hemiplegia / hemiperesis.
    b) Upper motor and lower motor neuron lesions.
    c) Parkinsonism
    d) Syringomyelia.
    e) Hemi-section / complete section of spinal cord.
    f) Cerebellar ataxia
    g) Other clinical conditions

"HEAD AND NECK COURSE OBJECTIVES"

On completion of the course of Head and Neck, the students are able to:

1. Describe mandible and different normae of the articulated skull.
2. Identify individual bones of the skull, their parts with important features.
3. Give post-natal growth changes in skull and face.
4. Comprehend cranial fossae, identify the foramina of the skull base and the structures passing through them.
5. Understand the vertebral column as a whole including sacrum and coccyx; describe regional features of the vertebrae, intervertebral joints, the movements thereof, and **comprehend clinical problems of the region**.
6. Identify, comprehend and describe cervical vertebrae, and the joints of the region i.e. temporo-mandibular, intervertebral, and cranio-vertebral. (cricothyroid and crico-arytenoid joints).
7. Identify and describe important muscles of the region i.e. muscles of: Facial expression, Mastication, prevertebral, postvertebral, infra and suprahyoid, suboccipital, tongue and palate; (pharynx, and larynx) **comprehend their actions nerve supply, effect of injury to them and clinical tests applied for diagnosis.**
8. Name and identify muscles of the floor of the mouth, sternocleidomastoid, trapezius, levator scapulae, and describe their origin, insertion, nerve supply, actions, important relations and effects of injury to their nerves and clinical tests to diagnose the nature of injury.
9. Identify and describe important arteries of the region, their branches and distribution i.e. subclavian, common, internal and external carotid arteries.
10. Comprehend clinical importance related to the arteries of head and neck and their

11. Identify subclavian, internal, external, and anterior Jugular veins, give their course, relationship, tributaries and clinical importance.
12. Identify and describe cranial venous sinuses and give their clinical significance.
13. Locate, identify and enlist the regional lymph nodes and describe the scheme of lymphatic drainage of the region.
14. Understand and describe the course and distribution of the cervical spinal and cranial nerves; comprehend formation of Cervical and Brachial plexuses, describe their branches and distribution.
15. **Understand and describe clinical conditions related to the nerve plexuses and their clinical manifestations**.
16. **Comprehend, understand and clearly describe the effects of injuries to different nerves and their clinical tests.**
17. **Identify sympathetic trunk and describe the scheme of sympathetic and parasympathetic innervations of the region, including the four parasympathetic ganglia, their roots, branches and distribution along with the clinical and applied anatomy..**
18. .Identify and describe the boundaries, contents and subdivisions of the anterior and posterior triangles of the neck.
19. **Understand and describe the superficial and deep fasciae of the region and correlate different fascial planes to their clinical importance.**
20. Identify and describe the viscera of the region i.e. salivary, thyroid, parathyroid glands, trachea and esophagus, and describe their anatomy and its applied aspects correctly
21. **Identify the anatomical features of the oral cavity, tongue, cheek, lips, gums and teeth, and describe these in detail with particular emphasis on their clinical applications.**
22. **Understand and describe the anatomy of the scalp, orbital and cranial cavities, their contents including meninges with highlights on important clinical aspects.**
23. **Understand and describe the anatomy of the nasal cavity, Para nasal sinuses, eye ball and external, middle and internal ear along with the clinical aspects.**
24. **Understand and describe the anatomy of pharynx, its muscles, their nerve supply and actions; clinical and applied aspects of pharynx.**
25. **Comprehend and describe the anatomy of larynx, its joints, muscles, their nerve supply and actions; clinical conditions related to the organ.**
26. **Correlate the anatomical information of the region to their clinical applications.**
27. **Interpret normal radiographs, CT Scans, MRI, and Ultrasound images.**

Additional Clinical Correlates

Cranial nerves distributions and lesions, dislocation of temporomandibular and intervertebral joints, scalp wounds, danger area of face, Little's area, Horner's syndrome, cavernous sinus thrombosis, intracranial hemorrhages, tracheostomy, mumps, sinusitis and retropharyngeal abscess, lymph nodes and lymphatic drainage of head and neck and, different conditions associated with lymphatics. Important muscles of head and neck their functions and effect of their nerve lesions.

"COURSE OBJECTIVES OF ABDOMEN AND PELVIS"

On completion of the Gross Anatomy of Abdomen and Pelvis, the students are able to:

1. Develop a sound understanding of the topographic anatomy of the regions.
2. Mark the regions of the abdomen on the surface of the body.
3. Mark the important abdominal and pelvic viscera on the surface of the body
4. Understand the importance of percussion notes in eliciting the extent of resonant and non-resonant viscera and their clinical importance.
5. Give a description of the Anatomy of the anterolateral and posterior abdominal walls.
6. **Understand and give clear description of inguinal canal, different varieties of external hernias and their complications.**
7. **Understand the peritoneum, peritoneal cavity and possible sites of internal hernias along with their clinical features.**
8. **Comprehend, understand and describe the abdomino-pelvic fasciae and their clinical importance.**
9. **Give a precise account of the Anatomy of abdominal and pelvic viscera, muscles, nerves and blood vessels of the regions and correlate anatomical information to common clinical conditions.**
10. **Understand the clinical effects and apply clinical tests to verify injuries to different nerves of the region.**
11. Develop clear concepts of anatomy of normal male and female pelvises, and differences between them.
12. **Understand the dimensions of the normal and contracted adult female pelvis and their clinical importance in the mechanism of delivery.**
13. **Understand the anatomy of the perineal region in both male and female and comprehend the anatomical basis of clinical conditions of the area.**
14. **Understand anatomical basis of possible birth injuries to the mother in difficult labor and the clinical conditions produced thereafter.**
15. Understand the scheme of the regional lymphatic drainage and lymph nodes.
16. **Comprehend normal radiological anatomy of the region, CT Scans, MRI, Ultrasound and, other diagnostic techniques.**

Additional Clinical Correlates

Portosystemic anastomosis, spread of carcinoma stomach, duodenal and peptic ulcer, appendicitis, hemorrhoids, anal fistula, anterior abdominal wall hernias, abdominal incisions, varicocele, hydrocoele, benign prostatic hyperplasia and carcinoma of prostate and uterus prolapse

2nd Year MBBS Session 2018- '19

Day	8:00am – 08:55am (Lecture)	08:55am – 09:50am (Lecture)	09:50am - 10:45am (Lecture)	10:45 am - 11:05 am	11:05am - 12:50pm		12:50pm - 2:35pm PRACTICAL/TUTORIAL	2:35pm-3:30pm
					Demonstration 11:05am-12:00pm	Practical Dissection 12:00-12:50pm		
Monday	Anatomy	Physiology	Biochemistry	BREAK	Dissection		**PRACTICAL Batch B (Physiology) Batch A (Anatomy) Batch C (Biochemistry)**	**SDL**
Tuesday	Biochemistry	Anatomy	Physiology		Dissection		**PRACTICAL Batch A (Physiology) Batch C (Anatomy) Batch B (Biochemistry)**	**SDL**
Wednesday	Physiology	Embryology	**Clinical Anatomy SGD (Tutorial)**		Dissection		**PRACTICAL Batch C (Physiology) Batch B (Anatomy) Batch A (Biochemistry**	**SDL**
Thursday	Clinical Lecture	Biochemistry	Physiology		Dissection		**Clinical Biochemistry SGD (Tutorial)**	**SDL**
Friday	**08:00am-09:30am (Tutorial)**	**09:30am-10:15am (Lecture)**	**10:15am-11:00am (Lecture)**	**11:00am-11:45am** Physiology (Lecture)	**11:45-12:30**	**12:30-1:30**	**1:30-2:30**	**2:30pm-3:30pm**
	Clinical Physiology	Anatomy	Biochemistry		Islm/Pk Stds.	Jumma Prayer	DSL	**SDL**

	SGD (Tutorial)							

ASSESSMENT

1. Written:
   - SEQs
   - MCQs

Practicals:
- Viva
- Surface markings
- OSPE including radiology

A. Histology Lectures

1. Written:
   - SEQs
   - MCQs

2. Practicals:
   - Histology Practicals
   - OSPE
   - Viva & Long Slide

B. Embryology Lectures

1. Written:
   - SEQs
   - MCQs
2. Practicals:
   OSPE
   Viva

Faculty

- Professor Dr Ferdose Sultana (Professor: Systemic Embryology Lectures & Supervision of all academic activities and assessment)
- Professor Dr Nazia Salman (NeuroAnatomy, Incharge 2nd year MBBS)
- Dr Masooma Ahmad (Special Histology Lecture)
- Dr Haseeb & Dr Uzma Batool (Gross Anatomy Demonstrations & Small group Discussions)
- Dr Maham Arshad (Gross Anatomy Demonstrations & Small group Discussions)
- Dr Huma & Dr Shumaila Sohail (HistoloDrgy Practicals)
- Dr Hamna Umar (Senior Demonstrator)
- Dr Mahmood Danishwar (Demonstrator)