

Syllabus Anatomy FIRST M.B.B.S(From August 2019)
(competency based Undergraduate curriculum for the indian medical graduate,2018.
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1	Normal anatomical position, various planes, relation, comparison, laterality & movement in our body
2	Composition of bone and bone marrow
3	Parts, blood and nerve supply of a long bone
4	Laws of ossification
5	Special features of a sesamoid bone
6	Various types of cartilage with its structure & distribution in body
7	Joints with subtypes and examples
8	Concept of nerve supply of joints & Hilton's law
9	Muscle tissue according to structure & action
10	Parts of skeletal muscle and difference between tendons and aponeuroses with examples
11	Shunt and spurt muscles
12	Different types of skin & dermatomes in body
13	Structure & function of skin with its appendages
14	Superficial fascia along with fat distribution in body
15	Modifications of deep fascia with its functions
16	Principles of skin incisions
17	Difference between blood vascular and lymphatic system
18	Difference between pulmonary and systemic circulation
19	General differences between arteries & veins
20	Functional difference between elastic, muscular arteries and arterioles
21	Portal system giving examples
22	Concept of anastomoses and collateral circulation with significance of end-arteries
23	Function of meta-arterioles, precapillary sphincters, arterio-venous anastomoses
24	Definition of thrombosis, infarction & aneurysm
25	Components and functions of the lymphatic system
26	Structure of lymph capillaries & mechanism of lymph circulation
27	Concept of lymphoedema and spread of tumors via lymphatics and venous system
28	General plan of nervous system with components of central, peripheral & autonomic nervous systems
29	Components of nervous tissue and their functions
30	Parts of a neuron and classify them based on number of neurites, size & function
31	Structure of a typical spinal nerve
32	Principles of sensory and motor innervation of muscles
33	Concept of loss of innervation of a muscle with its applied anatomy
34	Various type of synapse
35	Differences between sympathetic and spinal ganglia
36	Attachment, nerve supply & action of pectoralis major and pectoralis minor
37	Breast: location, extent, deep relations, structure, age changes, blood supply, lymphatic drainage, microanatomy and applied anatomy of breast
38	Development of breast
39	Boundaries and contents of axilla
40	Origin, extent, course, parts, relations and branches of axillary artery & tributaries of vein
41	Formation, branches, relations, area of supply of branches, course and relations of terminal branches of brachial plexus
42	Anatomical groups of axillary lymph nodes and specify their areas of drainage
43	Variations in formation of brachial plexus
44	Anatomical basis of clinical features of Erb's palsy and Klumpke's paralysis
45	Anatomical basis of enlarged axillary lymph nodes
46	Position, attachment, nerve supply and actions of trapezius and latissimus dorsi
47	Arterial anastomosis around the scapula and the boundaries of triangle of auscultation
48	Deltoid and rotator cuff muscles
49	Attachment of serratus anterior with its action

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50	Shoulder joint for– type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements, muscles involved, blood supply, nerve supply & applied anatomy
51	Anatomical basis of Injury to axillary nerve during intramuscular injections
52	Muscle groups of upper arm with emphasis on biceps and triceps brachii
53	Origin, course, relations, branches (or tributaries), termination of important nerves and vessels in arm
54	Anatomical basis of Venepuncture of cubital veins
55	Anatomical basis of Saturday night paralysis
56	Boundaries and contents of cubital fossa
57	Anastomosis around the elbow joint
58	Important muscle groups of ventral forearm with attachments, nerve supply and actions
59	Origin, course, relations, branches (or tributaries), termination of important nerves and vessels of forearm
60	Flexor retinaculum with its attachments
61	Anatomical basis of carpal tunnel syndrome
62	Small muscles of hand. Also describe movements of thumb and muscles involved
63	Movements of thumb and muscles involved
64	Course and branches of important blood vessels and nerves in hand
65	Anatomical basis of Claw hand
66	Fibrous flexor sheaths, ulnar bursa, radial bursa and digital synovial sheaths
67	Infection of fascial spaces of palm
68	Important muscle groups of dorsal forearm with attachments, nerve supply and actions
69	Origin, course, relations, branches (or tributaries), termination of important nerves and vessels of back of forearm
70	Anatomical basis of Wrist drop
71	Compartments deep to extensor retinaculum
72	Extensor expansion formation
73	Fascia of upper limb and compartments, veins of upper limb and its lymphatic drainage
74	Dermatomes of upper limb
75	Type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements, blood and nerve supply of elbow joint, proximal and distal radio-ulnar joints, wrist joint & first carpometacarpal joint
76	Sternoclavicular joint, Acromioclavicular joint, Carpometacarpal joints & Metacarpophalangeal joint
77	Development of upper limb
78	Origin, course, relations, branches (or tributaries), termination of important nerves and vessels of anterior thigh
79	Major muscles with their attachment, nerve supply and actions
80	Boundaries, floor, roof and contents of femoral triangle
81	Anatomical basis of Psoas abscess & Femoral hernia
82	Adductor canal with its contents
83	Origin, course, relations, branches (or tributaries), termination of important nerves and vessels of gluteal region
84	Anatomical basis of sciatic nerve injury during gluteal intramuscular injections
85	Anatomical basis of Trendelenburg sign
86	Hamstrings group of muscles with their attachment, nerve supply and actions
87	Origin, course, relations, branches (or tributaries), termination of important nerves and vessels on the back of thigh
88	Boundaries, roof, floor, contents and relations of popliteal fossa
89	Type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements and muscles involved, blood and nerve supply, bursae around the hip joint
90	Anatomical basis of complications of fracture neck of femur
91	Dislocation of hip joint and surgical hip replacement
92	Major muscles of anterolateral compartment of leg with their attachment, nerve supply and actions
93	Origin, course, relations, branches (or tributaries), termination of important nerves and vessels of anterior compartment of leg
94	Anatomical basis of foot drop

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95	Type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements and muscles involved, blood and nerve supply, bursae around the knee joint
96	Anatomical basis of locking and unlocking of the knee joint
97	Knee joint injuries with its applied anatomy
98	Anatomical basis of Osteoarthritis
99	Major muscles of back of leg with their attachment, nerve supply and actions
100	Origin, course, relations, branches (or tributaries), termination of important nerves and vessels of back of leg
101	Peripheral heart
102	Anatomical basis of rupture of calcaneal tendon
103	Factors maintaining importance arches of the foot with its importance
104	Anatomical basis of Flat foot & Club foot
105	Anatomical basis of Metatarsalgia & Plantar fasciitis
106	Type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements and muscles involved, blood and nerve supply of tibiofibular and ankle joint
107	Fascia lata, Venous drainage, Lymphatic drainage, Retinacula & Dermatomes of lower limb
108	Anatomical basis of enlarged inguinal lymph nodes
109	Anatomical basis of varicose veins and deep vein thrombosis
110	Boundaries of thoracic inlet, cavity and outlet
111	Extent, attachments, direction of fibres, nerve supply and actions of intercostal muscles
112	Origin, course, relations and branches of a typical intercostal nerve
113	Origin, course and branches/ tributaries of: 1) anterior & posterior intercostal vessels 2) internal thoracic vessels
114	Origin, course, relations and branches of 1) atypical intercostal nerve 2) superior intercostal artery, subcostal artery
115	Type, articular surfaces & movements of manubriosternal, costovertebral, costotransverse and xiphisternal joints
116	Mechanics and types of respiration
117	Costochondral and interchondral joints
118	Boundaries and contents of the superior, anterior, middle and posterior mediastinum
119	Subdivisions, sinuses in pericardium, blood supply and nerve supply of pericardium
120	External and internal features of each chamber of heart
121	Origin, course and branches of coronary arteries
122	Anatomical basis of ischaemic heart disease
123	Formation, course, tributaries and termination of coronary sinus
124	Fibrous skeleton of heart
125	Parts, position and arterial supply of the conducting system of heart
126	External appearance, relations, blood supply, nerve supply, lymphatic drainage and applied anatomy of oesophagus
127	Extent, relations tributaries of thoracic duct and enumerate its applied anatomy
128	Origin, course, relations, tributaries and termination of superior venacava, azygos, hemiazygos and accessory hemiazygos veins
129	Extent, branches and relations of arch of aorta & descending thoracic aorta
130	Location and extent of thoracic sympathetic chain
131	Splanchnic nerves
132	Extent, relations and applied anatomy of lymphatic duct
133	Blood supply, lymphatic drainage and nerve supply of pleura, extent of pleura and describe the pleural recesses and their applied anatomy
134	Side, external features and relations of structures which form root of lung & bronchial tree and their clinical correlate
135	Bronchopulmonary segment
136	Phrenic nerve & describe its formation & distribution

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137	Blood supply, lymphatic drainage and nerve supply of lungs
138	Extent, length, relations, blood supply, lymphatic drainage and nerve supply of trachea
139	Development of pleura, lung & heart
140	Fetal circulation and changes occurring at birth
141	Embryological basis of: 1) atrial septal defect, 2) ventricular septal defect, 3) Fallot's tetralogy & 4) tracheo-oesophageal fistula
142	Developmental basis of congenital anomalies, transposition of great vessels, dextrocardia, patent ductus arteriosus and coarctation of aorta
143	Development of aortic arch arteries, SVC, IVC and coronary sinus
144	Layers of scalp, its blood supply, its nerve supply and surgical importance
145	Emissary veins with its role in spread of infection from extracranial route to intracranial venous sinuses
146	Muscles of facial expression and their nerve supply
147	Sensory innervation of face
148	Origin /formation, course, branches /tributaries of facial vessels
149	Branches of facial nerve with distribution
150	Cervical lymph nodes and lymphatic drainage of head, face and neck
151	Superficial muscles of face, their nerve supply and actions
152	Anatomical basis of facial nerve palsy
153	Surgical importance of deep facial vein
154	Parts, borders, surfaces, contents, relations and nerve supply of parotid gland with course of its duct and surgical importance
155	Anatomical basis of Frey's syndrome
156	Attachments, nerve supply, relations and actions of sternocleidomastoid
157	Anatomical basis of Erb's & Klumpke's palsy
158	Anatomical basis of wry neck
159	Attachments of 1) inferior belly of omohyoid, 2)scalenus anterior, 3) scalenus medius & 4) levator scapulae
160	Dural folds & dural venous sinuses
161	Clinical importance of dural venous sinuses
162	Effect of pituitary tumours on visual pathway
163	Extra ocular muscles of eyeball
164	Nerves and vessels in the orbit
165	Anatomical basis of Horner's syndrome
166	Components of lacrimal apparatus
167	Anatomical basis of oculomotor, trochlear and abducent nerve palsies along with strabismus
168	Boundaries and subdivisions of anterior triangle
169	Boundaries and contents of muscular, carotid, digastric and submental triangles
170	Extent, boundaries and contents of temporal and infratemporal fossae
171	Attachments, direction of fibres, nerve supply and actions of muscles of mastication
172	Articulating surface, type & movements of temporomandibular joint
173	Clinical significance of pterygoid venous plexus
174	Features of dislocation of temporomandibular joint
175	Morphology, relations and nerve supply of submandibular salivary gland & submandibular ganglion
176	Basis of formation of submandibular stones
177	Parts, extent, attachments, modifications of deep cervical fascia
178	Location, parts, borders, surfaces, relations & blood supply of thyroid gland
179	Origin, parts, course & branches subclavian artery
180	Origin, course, relations, tributaries and termination of internal jugular & brachiocephalic veins
181	Extent, drainage & applied anatomy of cervical lymph nodes
182	Extent, formation, relation & branches of cervical sympathetic chain
183	Course and branches of IX, X, XI & XII nerve in the neck
184	Anatomically relevant clinical features of Thyroid swellings

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185	Clinical features of compression of subclavian artery and lower trunk of brachial plexus by cervical rib
186	Fascial spaces of neck
187	Morphology, relations, blood supply and applied anatomy of palatine tonsil
188	Composition of soft palate
189	Components and functions of Waldeyer's lymphatic ring
190	Boundaries and clinical significance of pyriform fossa
191	Anatomical basis of tonsillitis, tonsillectomy, adenoids and peri-tonsillar abscess
192	Clinical significance of Killian's dehiscence
193	Features of nasal septum, lateral wall of nose, their blood supply and nerve supply
194	Location and functional anatomy of paranasal sinuses
195	Anatomical basis of sinusitis & maxillary sinus tumours
196	Morphology, identify structure of the wall, nerve supply, blood supply and actions of intrinsic and extrinsic muscles of the larynx
197	Anatomical aspects of laryngitis
198	Anatomical basis of recurrent laryngeal nerve injury
199	Morphology, nerve supply, embryological basis of nerve supply, blood supply, lymphatic drainage and actions of extrinsic and intrinsic muscles of tongue
200	Anatomical basis of hypoglossal nerve palsy
201	Parts, blood supply and nerve supply of external ear
202	Boundaries, contents, relations and functional anatomy of middle ear and auditory tube
203	Features of internal ear
204	Anatomical basis of otitis externa and otitis media
205	Anatomical basis of myringotomy
206	Parts and layers of eyeball
207	Anatomical aspects of cataract, glaucoma & central retinal artery occlusion
208	Position, nerve supply and actions of intraocular muscles
209	Contents of the vertebral canal
210	Boundaries and contents of Suboccipital triangle
211	Movements with muscles producing the movements of atlantooccipital joint & atlantoaxial joint
212	Microanatomy of pituitary gland, thyroid, parathyroid gland, tongue, salivary glands, tonsil, epiglottis, cornea, retina
213	Microanatomy of olfactory epithelium, eyelid, lip, sclero-corneal junction, optic nerve, cochlea- organ of corti, pineal gland
214	Development and developmental basis of congenital anomalies of face, palate, tongue, branchial apparatus, pituitary gland, thyroid gland & eye
215	Fascia, nerves & blood vessels of anterior abdominal wall
216	Formation of rectus sheath and its contents
217	Extent, boundaries, contents of Inguinal canal including Hesselbach's triangle.
218	Anatomical basis of inguinal hernia.
219	Attachments of muscles of anterior abdominal wall
220	Thoracolumbar fascia
221	Lumbar plexus for its root value, formation & branches
222	Major subgroups of back muscles, nerve supply and action
223	Coverings, internal structure, side determination, blood supply, nerve supply, lymphatic drainage & descent of testis with its applied anatomy
224	Parts of Epididymis
225	Penis: parts, components, blood supply and lymphatic drainage
226	Anatomical basis of Varicocoele
227	Anatomical basis of Phimosis & Circumcision
228	Boundaries and recesses of Lesser & Greater sac
229	Anatomical basis of Ascites & Peritonitis
230	Anatomical basis of Subphrenic abscess

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231	Clinical importance of Calot's triangle
232	Formation, course relations and tributaries of Portal vein, Inferior vena cava & Renal vein
233	Origin, course, important relations and branches of Abdominal aorta, Coeliac trunk, Superior mesenteric, Inferior mesenteric & Common iliac artery
234	Sites of portosystemic anastomosis
235	Anatomic basis of hematemesis& caput medusae in portal hypertension
236	Important nerve plexuses of posterior abdominal wall
237	Attachments, openings, nerve supply & action of the thoracoabdominal diaphragm
238	Abnormal openings of thoracoabdominal diaphragm and diaphragmatic hernia
239	Muscles of Pelvic diaphragm
240	Origin, course, important relations and branches of internal iliac artery
241	Branches of sacral plexus
242	Anatomical basis of suprapubic cystostomy, Urinary obstruction in benign prostatic hypertrophy, Retroverted uterus, Prolapse uterus, Internal and external haemorrhoids, Anal fistula, Vasectomy, Tubal pregnancy & Tubal ligation
243	Neurological basis of Automatic bladder
244	Structures palpable during vaginal & rectal examination
245	Superficial & deep perineal pouch (boundaries and contents)
246	Perineal body
247	Perineal membrane in male & female
248	Boundaries, content & applied anatomy of Ischiorectal fossa
249	Anatomical basis of Perineal tear, Episiotomy, Perianal abscess and Anal fissure
250	Curvatures of the vertebral column
251	Type, articular ends, ligaments and movements of Intervertebral joints, Sacroiliac joints & Pubic symphysis
252	Lumbar puncture (site, direction of the needle, structures pierced during the lumbar puncture)
253	Anatomical basis of Scoliosis, Lordosis, Prolapsed disc, Spondylolisthesis & Spina bifida
254	Microanatomical features of Gastro-intestinal system: Oesophagus, Fundus of stomach, Pylorus of stomach, Duodenum, Jejunum, Ileum, Large intestine, Appendix, Liver, Gall bladder, Pancreas & Suprarenal gland
255	Microanatomical features of: Urinary system: Kidney, Ureter & Urinary bladder
256	Microanatomical features of: Male Reproductive System: Testis, Epididymis, Vas deferens, Prostate & penis
257	Microanatomical features of: Female reproductive system: Ovary, Uterus, Uterine tube, Cervix, Placenta & Umbilical cord
258	Development of anterior abdominal wall
259	Development and congenital anomalies of Diaphragm
260	Development and congenital anomalies of: Foregut, Midgut & Hindgut
261	Development of Urinary system
262	Development of male & female reproductive system
263	Various layers of meninges with its extent & modifications
264	Circulation of CSF with its applied anatomy
265	External features of spinal cord
266	Extent of spinal cord in child & adult with its clinical implication
267	Transverse section of spinal cord at mid-cervical & mid- thoracic level
268	Ascending & descending tracts at mid thoracic level of spinal cord
269	Anatomical basis of syringomyelia
270	External features of medulla oblongata
271	Transverse section of medulla oblongata at the level of 1) pyramidal decussation, 2) sensory decussation 3) Inferior Olivary Nucleus
272	Cranial nerve nuclei in medulla oblongata with their functional group
273	Anatomical basis & effects of medial & lateral medullary syndrome

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275	Transverse section of pons at the upper and lower level
276	Cranial nerve nuclei in pons with their functional group
277	External & internal features of cerebellum
278	Connections of cerebellar cortex and intracerebellar nuclei
279	Anatomical basis of cerebellar dysfunction
280	External & internal features of midbrain
281	Internal features of midbrain at the level of superior & inferior colliculus
282	Anatomical basis & effects of Benedikt's and Weber's syndrome
283	Cranial nerve nuclei with its functional component
284	Surfaces, sulci, gyri, poles, & functional areas of cerebral hemisphere
285	White matter of cerebrum
286	Parts & major connections of basal ganglia & limbic lobe
287	Boundaries, parts, gross relations, major nuclei and connections of dorsal thalamus, hypothalamus, epithalamus, metathalamus and subthalamus
288	Formation, branches & major areas of distribution of circle of Willis
289	Parts, boundaries & features of IIIrd, IVth & lateral ventricle
290	Anatomical basis of congenital hydrocephalus
291	Microanatomical features of Spinal cord, Cerebellum & Cerebrum
292	Development of neural tube, spinal cord, medulla oblongata, pons, midbrain, cerebral hemisphere & cerebellum
293	Various types of open neural tube defects with its embryological basis
294	Epithelium
295	Various types of connective tissue with functional correlation
296	Connective tissue
297	Various types of muscle under the microscope
298	Multipolar & unipolar neuron, ganglia, peripheral nerve
299	Structure-function correlation of neuron
300	Ultrastructure of nervous tissue
301	Various types and structure-function correlation of blood vessel
302	Ultrastructure of blood vessels
303	Exocrine gland : serous, mucous and mixed acini
304	Lymphoid tissue & microanatomy of lymph node, spleen, thymus, tonsil
305	Microanatomy of bone
306	Microanatomy of cartilage
307	Skin and its appendages under the microscope & their structure-function correlation
308	Structure of chromosomes with classification
309	Technique of karyotyping with its applications
310	Lyon's hypothesis
311	Various modes of inheritance with examples
312	Pedigree charts for the various types of inheritance & give examples of diseases of each mode of inheritance
313	Multifactorial inheritance with examples
314	Genetic basis & clinical features of Achondroplasia, Cystic Fibrosis, Vitamin D resistant rickets, Haemophilia, Duchene's muscular dystrophy & Sickle cell anaemia
315	Structural and numerical chromosomal aberrations
316	Mosaics and chimeras with example
317	Genetic basis & clinical features of Prader Willi syndrome, Edward syndrome & Patau syndrome
318	Genetic basis of variation: polymorphism and mutation
319	Principles of genetic counselling
320	Terms- phylogeny, ontogeny, trimester, viability
321	Uterine changes occurring during the menstrual cycle
322	Synchrony between the ovarian and menstrual cycles

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324	Stages and consequences of fertilisation
325	Anatomical principles underlying contraception
326	Teratogenic influences; fertility and sterility, surrogate motherhood, social significance of "sex-ratio".
327	Cleavage and formation of blastocyst
328	Development of trophoblast
329	Process of implantation & common abnormal sites of implantation
330	Formation of extra-embryonic mesoderm and coelom, bilaminar disc and prochordal plate
331	Abortion; decidual reaction, pregnancy test
332	Formation & fate of the primitive streak
333	Formation & fate of notochord
334	Process of neurulation
335	Development of somites and intra-embryonic coelom
336	Embryological basis of congenital malformations, nucleus pulposus, sacrococcygeal teratomas, neural tube defects
337	Diagnosis of pregnancy in first trimester and role of teratogens, alpha-fetoprotein
338	Formation, functions & fate of-chorion: amnion; yolk sac; allantois & decidua
339	Formation & structure of umbilical cord
340	Formation of placenta, its physiological functions, foetomaternal circulation & placental barrier
341	Embryological basis of twinning in monozygotic & dizygotic twins
342	Role of placental hormones in uterine growth & parturition
343	Embryological basis of estimation of fetal age.
344	Various types of umbilical cord attachments
345	Various methods of prenatal diagnosis
346	Indications, process and disadvantages of amniocentesis
347	Indications, process and disadvantages of chorion villus biopsy
348	Correct procedure when handling cadavers and other biologic tissue