

COURSE CONTENT

**Based on Competency Table published by NMC letter no.
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**For details, students/teachers are directed to refer
competency task published on NMC Website**

Subject: ANATOMY

Year: First MBBS

Number	COMPETENCY <i>The student should be able to</i>	Predominant domain K/S/A/C	Level K/ KH/S H/P	Core (Y/N)	Suggested teaching learning method	Suggested assessment method	Number required to certify P
Anatomy (Topics = 82, Competencies = 413)							
Topic 1: Anatomical Terminology -		Number of Competencies (2)		Number of competencies for certification: (NIL)			
AN1.1	Describe and Demonstrate normal anatomical position, various planes, relation, comparison, laterality and movements in the human body	K/S	SH	Y	LGT, Demonstration	Written / Viva voce / Skill assessment	
AN1.2	Describe composition of bone and bone marrow	K	KH	Y	LGT	Written / viva	
Topic 2: General Features of Bones and Joints		Number of Competencies (6)		Number of competencies for certification: (NIL)			
AN2.1	Describe parts, types, peculiarities of each type, blood and nerve supply of bones.	K	KH	Y	LGT	Written / Viva voce	
AN2.2	Describe the laws of ossification, epiphysis, its various types and their importance	K	KH	N	LGT	Written / Viva voce	
AN2.3	Describe special features of a sesamoid bone	K	KH	N	LGT, Demonstration	Written / Viva voce	
AN2.4	Describe various types of cartilage with its structure and distribution in body	K	KH	Y	LGT, Demonstration	Written / Viva voce	
AN2.5	Describe and demonstrate various joints with possible movements, subtypes and examples	K, S	SH	Y	LGT, Demonstration	Written / Viva voce / skills assessment	

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AN2.6	Explain the concept of nerve supply of joints and Hilton's law	K	KH	Y	LGT, Demonstration	Written / Viva voce	
Topic 3: General Features of Muscle							
Number of Competencies (3)				Number of competencies for certification: (NIL)			
AN3.1	Classify and describe muscle tissue according to structure, size, shape, region and action	K	KH	Y	LGT, Demonstration	Written / Viva voce	
AN3.2	Describe parts of skeletal muscle and differentiate between tendons and aponeuroses with examples	K	KH	Y	LGT, Demonstration	Written / Viva voce	
AN3.3	Explain Shunt and spurt muscles with examples and role in joint movement	K	KH	N	LGT, Demonstration	Written / Viva voce	
Topic 4: General Features of Skin and Fascia							
Number of Competencies (5)				Number of competencies for certification: (NIL)			
AN4.1	Describe different types of skin and dermatomes in body	K	KH	N	LGT, Demonstration	Written / Viva voce	
AN4.2	Describe and demonstrate structure of skin with its appendages along with clinical anatomy	K, S	SH	Y	LGT, Demonstration	Written / Viva voce	
AN4.3	Describe structure, contents and identify modifications of superficial fascia along with fat distribution in body	K, S	SH	Y	LGT, Demonstration	Written / Viva voce	
AN4.4	Describe and demonstrate modifications of deep fascia with its location, function and examples	K, S	SH	Y	LGT, Demonstration	Written / Viva voce	

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AN4.5	Explain principles of skin incisions and their surgical importance	K	KH	N	LGT, Demonstration	Written	
Topic 5: General Features of the Cardiovascular System							
Number of Competencies (8)				Number of competencies for certification: (NIL)			
AN5.1	Differentiate between blood vascular and lymphatic system	K	KH	Y	LGT, Demonstration	Written / <i>Viva voce</i>	
AN5.2	Differentiate between pulmonary and systemic circulation	K	KH	Y	LGT, Demonstration	Written / <i>Viva voce</i>	
AN5.3	Describe general differences between arteries, veins and sinuses	K	KH	Y	LGT, Demonstration	Written / <i>Viva voce</i>	
AN5.4	Explain functional and gross structural differences between elastic, muscular arteries and arterioles	K	KH	Y	LGT, Demonstration	Written / <i>Viva voce</i>	
AN5.5	Describe portal system giving examples	K	KH	Y	LGT, Demonstration	Written / <i>Viva voce</i>	
AN5.6	Describe the concept of anastomoses and collateral circulation, its different sites and significance of end arteries	K	KH	Y	LGT, Demonstration	Written / <i>Viva voce</i>	
AN5.7	Explain function of meta-arterioles, precapillary sphincters, arterio-venous anastomoses	K	KH	N	LGT, Demonstration	Written / <i>Viva voce</i>	
AN5.8	Describe thrombosis, infarction and aneurysm	K	KH	N	LGT, Demonstration	Written / <i>Viva voce</i>	

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Topic 6: General Features of Lymphatic System		Number of Competencies (3)			Number of competencies for certification: (NIL)		
AN6.1	Describe the components and functions of the lymphatic system	K	KH	N	LGT, Demonstration	Written / <i>Viva voce</i>	
AN6.2	Describe structure of lymph capillaries and mechanism of lymph circulation	K	KH	N	LGT, Demonstration	Written	
AN6.3	Explain the concept of lymphoedema and spread of tumors via lymphatics and venous system	K	KH	N	LGT, Demonstration	Written / <i>Viva voce</i>	
Topic 7: Introduction to the Nervous System		Number of Competencies (8)			Number of competencies for certification: (NIL)		
AN7.1	Describe general plan of nervous system with components of central, peripheral and autonomic nervous systems	K	KH	Y	LGT, Demonstration	Written / <i>Viva voce</i>	
AN7.2	List components of nervous tissue and their functions	K	KH	Y	LGT, Demonstration	Written / <i>Viva voce</i>	
AN7.3	Describe parts of a neuron and classify them based on number of neurites, size and function	K	KH	Y	LGT, Demonstration	Written / <i>Viva voce</i>	
AN7.4	Describe structure of a typical spinal nerve	K	KH	Y	LGT, Demonstration	Written / <i>Viva voce</i>	
AN7.5	Describe principles of sensory and motor innervation of muscles	K	KH	N	LGT, Demonstration	Written	
AN7.6	Describe concept of loss of innervation of a muscle with its applied anatomy	K	KH	Y	LGT, Demonstration	Written / <i>Viva voce</i>	

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AN7.7	Describe various types of synapse	K	KH	N	LGT, Demonstration	Written	
AN7.8	Describe differences between sympathetic and spinal ganglia	K	KH	N	LGT, Demonstration	Written	
Topic 8: Features of Individual Bones (Upper Limb)							
		Number of Competencies (4)		Number of competencies for certification: (NIL)			
AN8.1	Identify the given bone, its side, anatomical position, joint formation, important features and clinical anatomy (clavicle, scapula, humerus, radius, ulna, carpal bones)	K, S	SH	Y	Demonstration	Written / <i>Viva voce</i> / skill assessment	
AN8.2	Demonstrate important muscle attachments on the given bone	K, S	SH	Y	Demonstration	Written / <i>Viva voce</i> / skill assessment	
AN8.3	Identify and name various bones in articulated hand, Specify the parts of metacarpals and phalanges and enumerate the peculiarities of pisiform	K, S	SH	Y	Demonstration	<i>Viva voce</i> Practicals	
AN8.4	Describe scaphoid fracture and explain the anatomical basis of avascular necrosis	K	KH	N	LGT, Demonstration	<i>Viva voce</i>	
Topic 9: Pectoral Region							
		Number of Competencies (3)		Number of competencies for certification: (NIL)			
AN9.1	Describe attachment, nerve supply and action of pectoralis major and pectoralis minor and describe clavipectoral fascia	K	KH	Y	LGT, Practical, Demonstration, Dissection	Written / <i>Viva voce</i>	

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AN9.2	Describe the location, extent, deep relations, structure, blood supply, lymphatic drainage, microanatomy and applied anatomy of breast	K	KH	Y	LGT	Written / <i>Viva voce</i>	
AN9.3	Describe development of breast, associated age changes and congenital anomalies	K	KH	N	LGT, Demonstration	Written / <i>Viva voce</i>	
Topic 10: Axilla, Shoulder and Scapular Region		Number of Competencies (13)			Number of competencies for certification: (NIL)		
AN10.1	Identify and describe boundaries and contents of axilla	K, S	SH	Y	LGT, Practical, Demonstration, Dissection	Written / <i>Viva voce</i> / skill assessment	
AN10.2	Identify, describe and demonstrate the origin, extent, course, parts, relations and branches of axillary artery and tributaries of axillary vein	K, S	SH	Y	LGT, Practical, Demonstration, Dissection	Written / <i>Viva voce</i> / skill assessment	
AN10.3	Describe, identify and demonstrate formation, branches, relations, area of supply of branches, course and relations of terminal branches of brachial plexus	K, S	SH	Y	LGT, Practical, Demonstration, Dissection	Written / <i>Viva voce</i> / skill assessment	
AN10.4	Describe the anatomical groups of axillary lymph nodes and specify their areas of drainage	K	KH	Y	LGT, Practical, Demonstration, Dissection	Written / <i>Viva voce</i> / skill assessment	

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AN10.5	Explain variations in formation of brachial plexus	K	KH	Y	LGT, Practical, Demonstration, Dissection	Written / <i>Viva voce</i>	
AN10.6	Explain the anatomical basis of clinical features of Erb's palsy and Klumpke's paralysis	K	KH	Y	LGT, Demonstration	Written / <i>Viva voce</i>	
AN10.7	Describe axillary lymph nodes, areas of drainage and anatomical basis of their enlargement	K	KH	Y	LGT, Practical, Demonstration, Dissection	Written	
AN10.8	Describe, identify and demonstrate the position, attachment, nerve supply and actions of trapezius and latissimus dorsi	K, S	SH	Y	LGT, Practical, Demonstration, Dissection	Written / <i>Viva voce</i> / skill assessment	
AN10.9	Describe the arterial anastomosis around the scapula and mention the boundaries of triangle of auscultation	K	KH	N	LGT, Practical, Demonstration, Dissection	Written	
AN10.10	Describe and identify the deltoid and rotator cuff muscles along with their nerve supply and clinical anatomy	K, S	SH	Y	LGT, Practical, Demonstration, Dissection	Written / <i>Viva voce</i> / skill assessment	
AN10.11	Describe and demonstrate attachment, action and clinical anatomy of serratus anterior muscle	K, S	SH	Y	LGT, Practical, Demonstration, Dissection	Written / <i>Viva voce</i> / skill assessment	
AN10.12	Describe and demonstrate shoulder joint for- type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements, muscles involved, blood supply, nerve supply and applied anatomy	K, S	SH	Y	LGT, Practical, Demonstration, Dissection	Written / <i>Viva voce</i> / skill assessment	

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AN10.13	Explain anatomical basis of injury to axillary nerve during intramuscular injections	K	KH	Y	LGT	Viva voce	
Topic 11: Arm and Cubital Fossa							
Number of Competencies (6)				Number of competencies for certification: (NIL)			
AN11.1	Describe and demonstrate muscle groups of upper arm with emphasis on biceps and triceps brachii	K,S	SH	Y	LGT, Practical, Demonstration, Dissection	Written / Viva voce / skill assessment	
AN11.2	Identify & describe origin, course, relations, branches (or tributaries), termination of important nerves and vessels in arm	K,S	SH	Y	LGT, Practical, Demonstration, Dissection	Written / Viva voce / skill assessment	
AN11.3	Describe the anatomical basis of Venipuncture of cubital veins	K	KH	Y	LGT, Demonstration	Written / Viva voce	
AN11.4	Describe the anatomical basis of Saturday night palsy	K	KH	Y	LGT, Demonstration	Written / Viva voce	
AN11.5	Identify & describe boundaries and contents of cubital fossa	K,S	SH	Y	LGT, Practical, Demonstration, Dissection	Written / Viva voce / skill assessment	
AN11.6	Describe the anastomosis around the elbow joint	K	KH	N	LGT	Written	
Topic 12: Forearm and Hand							
Number of Competencies (15)				Number of competencies for certification: (NIL)			
AN12.1	Describe and demonstrate important muscle groups of ventral forearm with attachments, nerve supply and actions	K,S	SH	Y	LGT, Practical, Demonstration, Dissection	Written / Viva voce / skill assessment	