

Lab Practical - Lymphatic, Respiratory and Urinary Systems

Lymphatic System an Immune Response -

lymph collecting vessels	lymph node	locations of lymph nodes
lymphatic capillaries	afferent lymph vessel	abdominal
thoracic duct	capsule	axillary
right lymphatic duct	cortex	cervical
subclavian vein (R & L)	medulla	inguinal
cisterna chyli	follicle	pelvic
specialized organs/tissues	germinal centers (nodules)	popliteal
Peyer's patches	lymph sinus	supratrochlear
spleen	efferent lymph vessels	thoracic
red pulp	hilus	
white pulp	reticular connective tissue	tonsil
thymus	lymphocyte	lingual
bone marrow	macrophage	palatine
	neutrophil	pharyngeal (adenoids)

Anatomy of the Respiratory System -

Upper Respiratory	Larynx	Lobes of the lungs
external nares (nostrils)	epiglottis	R - superior, middle, inferior
nasal cavity	thyroid cartilage	L - superior, inferior
nasal septum	arytenoid cartilage	respiratory muscles
perpendicular plate	corniculate cartilage	inspiratory muscles
vomer bone	cricoid cartilage	diaphragm
internal nares (nostrils)	cuneiform cartilage	external intercostals
nasal conchae	vocal cords	sternocleidomastoid
superior	Vestibular fold (false)	pectoralis minor
medial	Vocal fold (true)	scalenes
inferior	glottis	expiratory muscles
paranasal sinuses	Lower Respiratory	internal intercostals
ethmoid	Trachea	rectus abdominis
frontal	Carina (tracheal bifurcation)	external oblique
maxillary	Respiratory tree	internal oblique
sphenoid	primary bronchi (L & R)	transverse abdominis
hard palate	secondary (lobar) bronchi	
soft palate	tertiary (segmental) bronchi	parietal pleura
pharynx	terminal bronchiole	pleural cavity
nasopharynx	respiratory bronchiole	visceral pleura
oropharynx	alveolar duct	
laryngopharynx	alveolar sacs	internal respiration
	alveoli	external respiration

Respiratory System Physiology -

Respiratory volumes	pulmonary ventilation
Tidal Volume (TV)	inspiration
Inspiratory Reserve Volume (IRV)	expiration
Expiratory Reserve Volume (ERV)	
Residual Volume (RV)	spirometer
Vital Capacity (VC) = TV + IRV + ERV	
Total Lung Capacity (TLC) = VC + RV	
Minute Respiratory Volume (MRV) = TV x breaths/minute	

Anatomy of the Urinary System -

kidney	renal blood supply	nephron
renal capsule	renal artery	renal corpuscle
renal cortex	segmental artery	glomerulus
renal medulla	Lobar artery	glomerular (Bowman's) capsule
renal column	interlobar artery	proximal convoluted tubule
renal pyramid	arcuate artery	loop of Henle
major calyx	interlobular artery	descending limb
minor calyx	afferent arteriole	ascending limb
renal pelvis	glomerulus	distal convoluted tubule
renal hilum	efferent arteriole	collecting tubule (duct)
ureter	peritubular capillaries	juxtaglomerular apparatus
bladder	vasa recta	macula densa
trigone	interlobular vein	juxtaglomerular cells
detrusor muscle	arcuate vein	types
transitional epithelium	interlobar vein	cortical
urethra	renal vein	juxtamedullary
prostatic urethra		
membranous urethra		
penile urethra		
internal urethral sphincter		
external urethral sphincter		

Urinalysis -

pH = 4.6 - 8.0	organized sediments
specific gravity = 1.003 - 1.035	WBCs (pus)
albumin	RBCs
urobilin / urochrome	squamous epithelium
glucose	transitional epithelium
ketones	granular casts
unorganized sediments (crystals)	hyaline casts
renal calculus	fatty casts