Lab Practical 2 - BIOL 2402

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| **Ex. 48: Lymphatic System** |
| lymph vessels | lymph node | locations of lymph nodes |
|  | lymphatic capillaries |  | afferent lymph vessel |  | abdominal |
|  | thoracic duct |  | capsule |  | axillary |
|  | right lymphatic duct |  | cortical region (cortex) \* |  | cervical |
|  | subclavian vein (R & L) |  | medullary region (medulla) |  | inguinal |
|  | cisterna chyli |  | reticular conn. tissue |  | pelvic |
| specialized organs/tissues |  | germinal centers (nodules) |  | popliteal |
|  | Peyer's patches |  | lymph sinus |  | supratrochlear |
|  | spleen |  | efferent lymph vessels |  | thoracic |
|  | thymus |  hilum |  |  |
|  | tonsil |  |  |  |
|  |  lingual | lymphocyte |  |  |
|  |  palantine | macrophage |  |  |
|  |  pharyngeal (adenoids) | neutrophil |  |  |

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| Ex. 52 & 53 Organs of the Respiratory System |
| Upper Respiratory | larynx | lobes |
|  | external nares (nostrils) |  | epiglottis |  | 3 - R |
|  | nasal cavity |  | thyroid cartilage |  | 2 - L |
|  | nasal septum |  | arytenoid cartilage | respiratory muscles |
|  |  | perpendicular plate |  | corniculate cartilage |  | inspiratory muscles |
|  |  | vomer bone |  | cricoid cartilage |  |  | diaphragm |
|  | internal nares |  | vocal cords |  |  | external intercostals |
|  | nasal conchae |  |  | false  |  |  | sternocleidomastoid |
|  |  | superior |  |  | TRUE |  |  | pectoralis minor |
|  |  | middle |  | glottis |  |  | scalenes\* |
|  |  | inferior | Lower Respiratory |  | expiratory muscles |
|  | paranasal sinuses |  | trachea |  |  | internal intercostals |
|  |  | ethmoid |  | respiratory tree |  |  | rectus abdominis |
|  |  | frontal |  |  | primary bronchi (L & R) |  external oblique |
|  |  | maxillary |  |  | secondary (lobar) bronchi |  internal oblique |
|  |  | sphenoid |  |  | tertiary (segmental) bronchi |  transverse abdominis |
|  | hard palate |  |  | intralobular bronchiole |   |
|  | soft palate |  |  | terminal bronchiole | parietal pleura |
|  | pharynx |  |  | respiratory bronchiole | pleural cavity |
|  |  | nasopharynx |  |  | alveolar duct | visceral pleura |
|  |  | oropharynx |  |  | alveolar sacs |  |
|  |  | laryngopharynx |  |  alveoli |  |
|  |  |  |  | lungs |  |

**\* not in lab manual – check text, website, or other source**

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| Ex. 54 & 55: Breathing & Respiratory Volume & Capacities |
| Respiratory volumes |  |
|  | Tidal Volume (TV) | Vital Capacity (VC) = TV + IRV + ERV |
|  | Inspiratory Reserve Volume (IRV) | Total Lung Capacity (TLC) = VC + RV |
|  | Expiratory Reserve Volume (ERV) | Minute Respiratory Volume (MRV) = TV x breaths/min. |
|  | Residual Volume (RV) |  |
|  |  |  |
| spirometer |  |

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| Ex. 56 & 58 Urinary System |
| kidney | renal blood supply | nephron |
|  | renal capsule |  | renal artery |  | renal corpuscle |
|  | renal cortex |  | segmental artery \* |  |  | glomerulus |
|  | renal medulla |  | interlobar artery |  |  | glomerular (Bowman's) capsule |
|  |  | renal column |  | arcuate artery |  | proximal convoluted tubule |
|  |  | renal pyramid |  | interlobular artery |  | loop of Henle |
|  | major calyx |  | afferent arteriole |  |  | descending limb |
|  | minor calyx |  | glomerulus |  |  | ascending limb |
|  | renal pelvis |  | efferent arteriole |  | distal convoluted tubule |
|  | renal hilum |  | peritubular capillaries |  | collecting tubule (duct) |
| ureter |  | vasa recta |  | juxtaglomerular apparatus |
| bladder |  | interlobular vein |  |  | macula densa |
|  | trigone |  | arcuate vein |  |  | juxtaglomerular cells |
|  | detrusor muscle |  | interlobar vein |  | types |
|  | transitional epithelium |  | renal vein |  |  | cortical  |
| urethra |  |  |  |  | juxtamedullary |
|  | prostatic urethra |  |  |  |  |  |
|  | membranous urethra |  |  |  |  |  |
|  | penile urethra |  |  |  |  |  |
|  | internal urethral sphincter |  |  |  |  |  |
|  | external urethral sphincter |  |  |  |  |  |

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| Ex. 57 Urinalysis (Handout) |  |  |
| pH = 4.6 - 8.0 | organized sediments |
| specific gravity = 1.003 - 1.035 |  | WBCs (pus) |
|  |  | RBCs |
| unorganized sediments (crystals) |  | epithelial cells |
|  renal calculus  |  | casts |

**\* not in lab manual – check text, website, or other source**