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 | |

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