Introduction to Anatomy and Physiology

BIOL 2404: Lab Practical 1

**Lab Safety Rules:** Please read and sign.

**Chapter 1:**

**Organization of the body**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Abdominal | Carpal | Gluteal | Otic | Umbilical |
| Acromial | Digital | Mammary | Pectoral | Vertebral |
| Axillary | Femoral | Mental | Pedal |  |
| Brachial | Frontal | Optic | Pubic/genital |  |

**Identify and locate the following**

|  |  |  |
| --- | --- | --- |
| Heart | Liver | Stomach |
| Lung | Small Intestine | Kidney |
| Diaphram | Large Intestine | Adrenal Glands |

**Identify the abdominopelvic regions and quadrants**

|  |  |  |
| --- | --- | --- |
| Right hypochondriac region | Epigastric region | Left hypochondriac region |
| Right lumber region | Umbilical region | Left lumber region |
| Right illiac region | Hypogastric region | Left illiac region |

|  |  |
| --- | --- |
| Right Upper Quadrant | Left Upper Quadrant |
| Right Lower Quadrant | Left lower Quadrant |

**Directional Terms:** Medial/Lateral Proximal/Deep

Superior/Inferior Superficial/Deep

**Chapter 3:**

**Identify the Microscope parts**

|  |  |  |  |
| --- | --- | --- | --- |
| Arm | Body | Fine Adjustment Knob | Objective lens (scan, low, high) |
| Base | Coarse adjustment knob | Eyepiece | Stage |

**Identify the Cell Structure**

|  |  |  |  |
| --- | --- | --- | --- |
| Cell membrane | Nucleus | Mitochondria | Rough Endoplasmic reticulum |
| Cytoplasm | DNA/Chromatin | Golgi | Smooth Endoplasmic reticulum |

**Identify the stages of Cell Cycle Interphase Mitosis** Prophase

Metaphase

Anaphase

Telophase

**Chapter 4: Identify the tissues**

|  |  |  |  |
| --- | --- | --- | --- |
| **Epithelial** | **Connective** | **Musclular** | **Nervous** |
| Simple squamous | Loose (areolar) | Skeletal | Neuron cell |
| Simple cuboidal | Hyaline Cartilage | Cardiac | Neuroglia cell |
| Simple columnar | Blood | Smooth |  |
| Stratified squamous | Bone |  |  |

**Chapter 5: Integumentary**

Epidermis Sweat gland Hair root

Dermis Sebaceous gland Hair Shaft

Hypodermis

**Chapter 6:**

**Identify parts of the bone section**

|  |  |  |
| --- | --- | --- |
| Epiphysis | Diaphysis | Spongy Bone |
| Epiphyseal Line | Compact bone | Medullary Cavity |

**Identify the bones in the Skeletal System**

|  |  |  |
| --- | --- | --- |
| **Skull- Cranial Bones** | **Sutures** | **Skull- Facial Bones** |
| Frontal Bone | Coronal Suture | Maxillary bones |
| Parietal Bone | Sagittal Suture | Palatine bone |
| Occipital bone  Foramen Magnum | Lambdoidal Suture | Zygomatic bones |
| Temporal Bone  Mastoid process | Squamosal Suture | Lacrimal Bone |
| Sphenoid Bone |  | Nasal Bone |
| Ethmoid Bone |  | Mandible |

**Hyoid Bone**

**Vertebrae** Cervical Vertebrae (C1 to C7) Atlas (C1)

Intervertebral disk Thoracic Vertebrae (T1 to T12) Axis (C2)

Lumbar Vertebrae (L1 to L5)

Sacrum (4-5 fused)

Coccyx

**Costal (Ribs)** - 12 pairs True ribs(7) False ribs (5)

Floating ribs (last 2 pairs)

**Sternum Bone**

**Pectoral Girdle** Clavicle Scapula

Glenoid cavity

**Upper limb:** Humerus Radius Ulna

**Manus (Hand)** Carpals (8) Metacarpals (5) Phalanges (14)

**Pelvic Girdle:** Coxal Bone (hip bone) Illium

Ishium

Pubis

**Lower Limb:** Femur Tibia Fibula

**Foot:** Tarsals (7) Metatarsals (5) Phalanges (14)