

LAB EXAM 1 REVIEW SHEET

Lab 1: Introduction to Anatomy and Physiology

- ▶ Terms in Marieb Figs. 1.7a and b (p. 13)
- ▶ Terms in Marieb Table 1.1 (p. 12)
- ▶ Terms in Marieb Fig. 1.8 (p. 15)
- ▶ Terms in Marieb Fig. 1.9a and b

Identify the following organs and vessels in the torso model:

- | | | |
|-------------|-----------------------|-------------------|
| ▶ brain | ▶ abdominal vena cava | ▶ thyroid gland |
| ▶ trachea | ▶ lungs | ▶ spleen |
| ▶ esophagus | ▶ liver | ▶ kidneys |
| ▶ heart | ▶ stomach | ▶ small intestine |
| ▶ aorta | ▶ pancreas | ▶ large intestine |

Labs 2-3: Tissues

Be prepared to identify (under the microscope) and provide brief structural/functional characteristics of the following tissues:

Epithelia:

- ▶ simple squamous
- ▶ stratified squamous
- ▶ simple cuboidal
- ▶ stratified cuboidal
- ▶ simple columnar
- ▶ pseudostrat. columnar

Connective:

- ▶ areolar
- ▶ adipose
- ▶ dense regular
- ▶ dense irregular
- ▶ hyaline cartilage
- ▶ bone (osseous tissue)

Muscle:

- ▶ skeletal
- ▶ cardiac
- ▶ smooth

Note: you will be permitted to use your tissue identification key.

Lab 4: The Integumentary System

Terms in Marieb *Lab Manual* Figs. 7.1 (p. 92) and 7.2 (p. 93), on both figures and models (if applicable):

- | | | |
|-----------------------|-------------------|----------------------|
| ▶ dermal papillae | ▶ hair shaft | ▶ stratum corneum |
| ▶ dermis | ▶ hypodermis | ▶ stratum granulosum |
| ▶ eccrine sweat gland | ▶ papillary layer | ▶ stratum lucidum |
| ▶ epidermis | ▶ reticular layer | ▶ stratum spinosum |
| ▶ hair follicle | ▶ sebaceous gland | |
| ▶ hair root | ▶ stratum basale | |

Be able to identify on prepared slides:

- | | | |
|------------------------|-------------------|----------------------|
| ▶ dermal papillae | ▶ hair root | ▶ stratum granulosum |
| ▶ dermis in general | ▶ hypodermis | ▶ stratum spinosum |
| ▶ eccrine sweat gland | ▶ sebaceous gland | |
| ▶ epidermis in general | ▶ stratum basale | |
| ▶ hair follicle | ▶ stratum corneum | |

Know the tissue types of epidermis and dermis.

Be able to distinguish between thick skin and thin skin (and where each is found on body).

Recognize and distinguish between cutaneous, serous, and mucous membranes on figures (Marieb Fig. 8.1, p. 106) and prepared slides.

Lab 5: Skeletal Tissues and The Axial Skeleton

Terms in Marieb *Lab Manual* Fig. 9.1 (p. 112)

Terms in Marieb Figs. 6.2 (p. 176) and 6.7 (p. 181)

Explain what happens when bones are acid-treated and baked.

Identify on sawed bone:

- ▶ compact bone
- ▶ spongy bone
- ▶ yellow marrow
- ▶ epiphysis
- ▶ periosteum
- ▶ articular cartilage

Identify on prepared slides or model:

- ▶ central (Haversian) canal
- ▶ lacuna
- ▶ lamella
- ▶ canaliculi
- ▶ osteon

Identify the following bones and bone markings of the skull:

| Bone | Associated Markings |
|-----------|--|
| frontal | ▶ coronal suture |
| parietal | ▶ sagittal suture |
| temporal | <ul style="list-style-type: none"> ▶ squamous suture ▶ external acoustic meatus ▶ zygomatic process ▶ mastoid process ▶ styloid process ▶ mandibular fossa ▶ petrous region ▶ jugular foramen ▶ carotid canal ▶ internal acoustic meatus |
| occipital | <ul style="list-style-type: none"> ▶ lambdoid suture ▶ foramen magnum ▶ occipital condyles |
| sphenoid | <ul style="list-style-type: none"> ▶ greater wings ▶ sella turcica ▶ lesser wings ▶ optic canals |
| ethmoid | <ul style="list-style-type: none"> ▶ crista galli ▶ cribriform plates ▶ perpendicular plate ▶ lateral masses |

| Bone | Associated Markings |
|--------------------------------|---|
| mandible | <ul style="list-style-type: none"> ▶ mandibular condyle ▶ coronoid process ▶ mandibular ramus ▶ angle |
| maxilla | <ul style="list-style-type: none"> ▶ palatine processes |
| lacrima (from figures only) | |
| palatine | |
| zygomatic | |
| nasal | |
| vomer | |
| inferior nasal conchae | |
| hyoid | |

Identify the following bones and bone markings of the vertebral column:

| Bone | Associated Markings |
|--------------------|---|
| vertebra | <ul style="list-style-type: none"> ▶ body ▶ vertebral arch ▶ spinous process ▶ transverse process ▶ vertebral foramen <ul style="list-style-type: none"> ▶ superior articular process ▶ inferior articular process ▶ intervertebral foramina ▶ intervertebral disc |
| cervical vertebrae | <ul style="list-style-type: none"> ▶ cervical curvature ▶ transverse foramina <ul style="list-style-type: none"> ▶ C₁: lateral masses ▶ C₂: dens |
| thoracic vertebrae | <ul style="list-style-type: none"> ▶ thoracic curvature |
| lumbar vertebrae | <ul style="list-style-type: none"> ▶ lumbar curvature |
| sacrum | <ul style="list-style-type: none"> ▶ sacral curvature |
| coccyx | |

Be able to recognize scoliosis, kyphosis, and lordosis (Marieb *Lab Manual* Fig. 10.12, p. 133).

Be able to identify whether curvatures are primary or secondary.

Identify the following bones and bone markings of the bony thorax:

| Bone | Associated Markings | | |
|---|--|---|---|
| sternum | <ul style="list-style-type: none"> ▶ manubrium ▶ body ▶ xiphoid process | | |
| ribs | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <i>Types:</i> <ul style="list-style-type: none"> ▶ vertebrosteral ▶ vertebrochondral ▶ vertebral </td> <td style="width: 50%; vertical-align: top;"> <i>Markings:</i> <ul style="list-style-type: none"> ▶ head ▶ neck ▶ tubercle ▶ shaft ▶ costal cartilages </td> </tr> </table> | <i>Types:</i> <ul style="list-style-type: none"> ▶ vertebrosteral ▶ vertebrochondral ▶ vertebral | <i>Markings:</i> <ul style="list-style-type: none"> ▶ head ▶ neck ▶ tubercle ▶ shaft ▶ costal cartilages |
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Lab 6: The Appendicular Skeleton

Identify the following bones and bone markings of the pectoral girdle and upper extremity:

| Bone | Associated Markings | | |
|---|---|---|--|
| clavicle | <ul style="list-style-type: none"> ▶ acromial end ▶ sternal end | | |
| scapula | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> ▶ coracoid process ▶ acromion ▶ glenoid cavity ▶ spine </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> ▶ superior border ▶ medial border ▶ lateral border </td> </tr> </table> | <ul style="list-style-type: none"> ▶ coracoid process ▶ acromion ▶ glenoid cavity ▶ spine | <ul style="list-style-type: none"> ▶ superior border ▶ medial border ▶ lateral border |
| <ul style="list-style-type: none"> ▶ coracoid process ▶ acromion ▶ glenoid cavity ▶ spine | <ul style="list-style-type: none"> ▶ superior border ▶ medial border ▶ lateral border | | |
| humerus | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> ▶ greater and lesser tubercles ▶ deltoid tuberosity ▶ trochlea </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> ▶ capitulum ▶ coronoid fossa ▶ olecranon fossa </td> </tr> </table> | <ul style="list-style-type: none"> ▶ greater and lesser tubercles ▶ deltoid tuberosity ▶ trochlea | <ul style="list-style-type: none"> ▶ capitulum ▶ coronoid fossa ▶ olecranon fossa |
| <ul style="list-style-type: none"> ▶ greater and lesser tubercles ▶ deltoid tuberosity ▶ trochlea | <ul style="list-style-type: none"> ▶ capitulum ▶ coronoid fossa ▶ olecranon fossa | | |
| radius | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> ▶ head ▶ neck ▶ radial tuberosity </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> ▶ ulnar notch ▶ styloid process </td> </tr> </table> | <ul style="list-style-type: none"> ▶ head ▶ neck ▶ radial tuberosity | <ul style="list-style-type: none"> ▶ ulnar notch ▶ styloid process |
| <ul style="list-style-type: none"> ▶ head ▶ neck ▶ radial tuberosity | <ul style="list-style-type: none"> ▶ ulnar notch ▶ styloid process | | |
| ulna | <ul style="list-style-type: none"> ▶ coronoid process ▶ olecranon process ▶ trochlear notch ▶ styloid process | | |
| carpals (as a group) | | | |
| metacarpals (as a group) | | | |
| phalanges (as a group) | | | |

Identify the following bones and bone markings of the pelvic girdle and lower extremity:

| Bone | Associated Markings |
|--------------------------------|---|
| pelvic (coxal) bone | <ul style="list-style-type: none"> ▶ <i>ilium</i>: iliac crest, anterior superior & posterior superior spines, iliac fossa ▶ <i>ischium</i>: ischial tuberosity, ischial spine, greater & lesser sciatic notches ▶ <i>pubic bone</i>: obturator foramen, pubic crest |
| femur | <ul style="list-style-type: none"> ▶ head ▶ greater and lesser trochanters ▶ lateral and medial epicondyles ▶ lateral and medial condyles ▶ linea aspera |
| patella | |
| tibia | <ul style="list-style-type: none"> ▶ lateral and medial condyles ▶ medial malleolus ▶ tibial tuberosity |
| fibula | <ul style="list-style-type: none"> ▶ lateral malleolus |
| talus | |
| calcaneus | |
| remaining tarsals (as a group) | |
| metatarsals (as a group) | |
| phalanges (as a group) | |

On an articulated pelvis or skeleton, be able to identify:

- ▶ true pelvis
- ▶ false pelvis
- ▶ pelvic brim
- ▶ pubic symphysis
- ▶ pubic arch
- ▶ acetabulum

Be able to distinguish between a male and female pelvis.