***Station #1***

1. Name the structure with the gold circle on it. Frontal bone

1. Name the structure with the pink circle on it. Parietal bone
2. The structures named in questions 1 and 2 join at the \_coronal suture\_.
3. Briefly describe the structure named in question 3. Joint where 2 bones are held together by fibrous connective tissue.

***Station #2***

5. Name this bone. mandible

6, 7. This bone articulates superiorly with the \_\_6 mandibular fossa\_\_ (feature) of the \_7 temporal\_ bone.

8. Name a paired movement found at this joint.  
elevation/depression, protraction/retraction, lateral/medial excursion

***Station #3***

1. Name this bone. Occipital bone
2. The arrow is pointing to a large hole. Name it. Foramen magnum
3. Which two organs are connected through this hole? Brain/spinal cord

***Station #4***

12. The structure enclosed by the box is the \_\_sella turcica\_\_\_\_\_\_?

13. Which gland is housed in the structure referred to in question 10? pituitary

14. The structure referred to in question 12 is part of which bone? sphenoid

***Station #5***

1. Name the bone with the gold circle on it. maxilla
2. The teeth are found in the \_alveolar processes\_\_\_\_\_\_.
3. The teeth are held in place by the \_periodontal ligament\_.
4. A large, air-filled cavity in this bone is called a \_\_sinus\_\_\_\_\_.

***Station #6***

19. Name this bone. atlas

20. Name the surface with the pink circle on it. Superior articular facet

21. Which processes of the skull fit into the depressions labeled with pink circles? Occipital condyles

22. What type of synovial joint is formed where these two bones meet? Ellipsoid/condyloid

23. What type of movement occurs at this joint? Flexion/extension, lateral flexion, circumduction

***Station #7***

1. Name this bone. axis
2. Name the structure with the blue gold on it. Dens/odontoid process

26, 27. This structure (question #25) articulates superiorly with another important bone. The articulation between these two bones is an example of a \_\_26 pivot\_\_ joint, which allows a type of movement called \_\_27 rotation\_\_.

***Station #8, Part A***

1. This bone is a typical example of a \_\_rib\_\_\_\_\_\_.
2. How many bones have a structure similar to this bone? 12 pairs/24 total
3. This bone articulates posteriorly with \_(rib facet of the) thoracic vertebrae\_\_.

31, 32. This bone articulates anteriorly with the \_sternum\_\_\_\_ via \_costal cartilage\_\_\_\_.

***Station #8, Part B***

33. This bone is an example of a typical \_lumbar vertebrae\_\_\_.

34. How many bones have structure very similar to this bone? 5

***Station #9***

35. Name this bone. clavicle

36. This bone articulates medially with the \_manubrium of the sternum\_\_.

37. This bone articulates laterally with the \_acromion of the scapula\_\_\_.

***Station #10***

1. Name this bone. scapula
2. Name the structure with the gold circle on it. Glenoid fossa
3. At the structure named in #39, this bone articulates with which other bone? (head of the) humerus
4. What type of synovial joint is this? Ball and socket
5. Name a type of movement that occurs at this joint. Flexion/extension, abduction/adduction, circumduction

***Station #11***

43. Name this bone. humerus

44. Name the structure with the gold circle. capitulum

45. The structure named in #44 articulates with which other feature and bone? Head of radius

***Station #12***

46. Name this bone. radius

47. Name this bone. ulna

48. Name the type of joint connecting these two bones. syndesmosis

49. The special name used to describe what happens when bone #46 crosses over bone #47 is \_\_pronation\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

***Station #13***

50. The general name for the type of bone with the gold sticker is a \_carpal.

51. The general name for the type of bone with the pink sticker is a phalange.

52. Name the unique movement which occurs when the thumb and little finger are brought toward each other across the palm of the hand. opposition

53. The type of synovial joint that enables this movement is a saddle joint.

***Station #14***

54. Name this bone. Coxal bone, os coxa

55. This bone is composed of three fused bones. Name them. Ileum, ischium, pubis

56. Name the structure with the gold circle. Acetabulum

57. Name the feature and bone that articulates with number 56. head of femur

58. A pair of these bones (from number 54) meets anteriorly at the \_\_pubic symphysis joint\_\_.

***Station #15***

59. Name this bone. femur

60, 61. The distal end of this bone has two large, rounded \_60 condyles\_\_, which articulate with the \_61 proximal condyles of the tibia\_\_\_\_.

62, 63. Name two pads of fibro-cartilage present at this joint which help to build up and deepen the articular surfaces. Lateral and medial menisci

64, 65. Name two ligaments which help to stabilize this joint. Anterior and posterior cruciate, medial (tibial) and lateral (fibular) collateral ligaments

66. The two major types of movement found at this joint are \_\_flexion and extension\_\_\_.

***Station #16***

67. Name the two types of vertebral bodies which make up this structure. Sacrum, coccyx

68. How many individual bones make up this fused structure? Details! 5 sacrum, 4 coccyx

69. This structure articulates laterally with which other fused structure? Coxal bone

***Station #17***

70. Name the bone with the gold circle on it. talus

71. Name the bone with the pink circle on it. calcaneus

72. The bone in #70 articulates with which two other bones to form the ankle joint? Tibia, fibula

73. \_Inversion\_\_\_ of the foot consists of turning the ankle so that the plantar surface of the foot faces medially.

74. Lifting the foot so that its superior surface approaches the shin is known as \_dorsiflexion\_\_\_\_.

***Station #18***

1. \_Scoliosis\_\_\_\_\_ is an abnormal lateral and rotational curvature of the vertebral column.
2. \_Kyphosis\_\_\_\_ is an exaggeration of the concave curve of the thoracic region, resulting in a hunchback condition.
3. In a newborn, a large area of un-ossified membrane between some bones is called a \_fontanel\_\_\_\_\_.

***Station #19***

1. The arrow is pointing to a large hole. Name it. Orbit, eye socket

79. Which organ is located in the large hole? Eye

80, 81, 82. The walls of this structure are formed by seven different bones. Name three of them. Frontal, sphenoid, ethmoid, zygomatic, maxilla, palatine, lacrimal

1. The slit in the posterior portion of the hole is called \_\_superior orbital fissure\_\_\_.

84. The slit is located in the \_sphenoid\_\_\_\_ bone.

***Station #20***

85, 86. The bony portion of the nasal septum is formed by two bones, the \_vomer\_\_\_\_ and the perpendicular plate of the \_\_ethmoid\_\_\_.

87. The septum is completed anteriorly by a sheet of \_cartilage\_\_\_\_.Biology 121 **Test 5, Part B** Fall 2010

**SELECT THE ONE MOST CORRECT ANSWER TO THE QUESTION AND PLACE THE ANSWER IN THE CORRECT SPACE ON THE ANSWER SHEET.**

1. Which of the following is/are not part of the axial skeleton?
   1. Sternum
   2. Parietal bone
   3. Clavicles
   4. Vertebrae
   5. Ribs
2. The internal and external acoustic meatuses are openings in the
   1. Temporal bone
   2. Maxilla
   3. Parietal bone
   4. Frontal bone
   5. Sphenoid bone
3. The olfactory nerve tracts could be most easily damaged by a fracture of the \_\_\_ bone.
   1. Frontal
   2. Ethmoid
   3. Sphenoid
   4. Maxillary
   5. Temporal
4. The shape of an intervertebral disc most closely matches the shape of the \_\_\_ of a vertebra.
   1. Body
   2. Spinous process
   3. Transverse process
   4. Lamina
   5. Demifacet
5. A costal cartilage connects each \_\_\_\_\_ to the \_\_\_\_\_.
   1. Rib … sternum
   2. Rib … spinal column
   3. Metacarpal bone … carpal bones
   4. Metatarsal bone … tarsal bones
   5. Nasal bone … nasal septum
6. A styloid process is found on all of the following except the
   1. Radius
   2. Ulna
   3. Temporal bone
   4. Fibula
   5. Femur

Match the following terms and definitions.

1. luxation a. autoimmune disease
2. sprain b. accentuated lumbar curvature
3. osteoarthritis c. protrusion of nucleus pulposus through annulus
4. rheumatoid arthritis d. joint dislocation
5. gout e. torn ligaments
6. lordosis f. cartilage is destroyed on overworked joints

100.herniated disc g. uric acid crystals deposited in joints

Questions 1 – 74, 78 – 93: **MPO 2.2**

Questions 75 – 77, 94 – 100: **MPO 3.3**

Biology 121 – Test 5

Data obtained November 11, 2010

N = 24

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Question #** | **MPO** | **# Correct** | **Percentage** | **Average for same MPO** |
| 1 | **2.2** | 23 | 96 |  |
| 2 | **2.2** | 21 | 88 |  |
| 3 | **2.2** | 21 | 88 |  |
| 4 | **2.2** | 17 | 71 |  |
| 5 | **2.2** | 21 | 88 |  |
| 6 | **2.2** | 10 | 42 |  |
| 7 | **2.2** | 9 | 38 | **57.5%** |
| 8 | **2.2** | 7 | 29 | **72.2%** |
| 9 | **2.2** | 19 | 79 |  |
| 10 | **2.2** | 18 | 75 |  |
| 11 | **2.2** | 16 | 67 |  |
| 12 | **2.2** | 11 | 46 |  |
| 13 | **2.2** | 14 | 58 |  |
| 14 | **2.2** | 15 | 63 |  |
| 15 | **2.2** | 20 | 83 |  |
| 16 | **2.2** | 12 | 50 |  |
| 17 | **2.2** | 5 | 21 |  |
| 18 | **2.2** | 13 | 54 |  |
| 19 | **2.2** | 19 | 79 |  |
| 20 | **2.2** | 13 | 54 |  |
| 21 | **2.2** | 16 | 67 |  |
| 22 | **2.2** | 3 | 13 |  |
| 23 | **2.2** | 5 | 21 |  |
| 24 | **2.2** | 18 | 75 |  |
| 25 | **2.2** | 13 | 54 |  |
| 26 | **2.2** | 6 | 25 |  |
| 27 | **2.2** | 7 | 29 |  |
| 28 | **2.2** | 22 | 92 |  |
| 29 | **2.2** | 21 | 88 |  |
| 30 | **2.2** | 15 | 63 |  |
| 31 | **2.2** | 18 | 75 |  |
| 32 | **2.2** | 13 | 54 |  |
| 33 | **2.2** | 8 | 33 |  |
| 34 | **2.2** | 6 | 25 |  |
| 35 | **2.2** | 19 | 79 |  |
| 36 | **2.2** | 17 | 71 |  |
| 37 | **2.2** | 17 | 17 |  |
| 38 | **2.2** | 23 | 96 |  |
| 39 | **2.2** | 14 | 58 |  |
| 40 | **2.2** | 19 | 79 |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Question #** | **MPO** | **# Correct** | **Percentage** | **Average for same MPO** |
| 41 | **2.2** | 14 | 58 |  |
| 42 | **2.2** | 8 | 33 |  |
| 43 | **2.2** | 23 | 96 |  |
| 44 | **2.2** | 7 | 29 |  |
| 45 | **2.2** | 9 | 38 |  |
| 46 | **2.2** | 17 | 71 |  |
| 47 | **2.2** | 18 | 75 |  |
| 48 | **2.2** | 9 | 38 |  |
| 49 | **2.2** | 10 | 42 |  |
| 50 | **2.2** | 20 | 83 |  |
| 51 | **2.2** | 23 | 96 |  |
| 52 | **2.2** | 12 | 50 |  |
| 53 | **2.2** | 11 | 46 |  |
| 54 | **2.2** | 15 | 63 |  |
| 55 | **2.2** | 17 | 71 |  |
| 56 | **2.2** | 13 | 54 |  |
| 57 | **2.2** | 19 | 79 |  |
| 58 | **2.2** | 14 | 58 |  |
| 59 | **2.2** | 23 | 96 |  |
| 60 | **2.2** | 13 | 54 |  |
| 61 | **2.2** | 10 | 42 |  |
| 62 | **2.2** | 5 | 21 |  |
| 63 | **2.2** | 6 | 25 |  |
| 64 | **2.2** | 11 | 46 |  |
| 65 | **2.2** | 14 | 58 |  |
| 66 | **2.2** | 7 | 29 |  |
| 67 | **2.2** | 17 | 71 |  |
| 68 | **2.2** | 15 | 63 |  |
| 69 | **2.2** | 9 | 38 |  |
| 70 | **2.2** | 10 | 42 |  |
| 71 | **2.2** | 13 | 54 |  |
| 72 | **2.2** | 15 | 63 |  |
| 73 | **2.2** | 8 | 33 |  |
| 74 | **2.2** | 6 | 25 |  |
| 75 | **3.3** | 15 | 63 |  |
| 76 | **3.3** | 12 | 50 |  |
| 77 | **3.3** | 13 | 54 |  |
| 78 | **2.2** | 16 | 67 |  |
| 79 | **2.2** | 21 | 88 |  |
| 80 | **2.2** | 20 | 83 |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Question #** | **MPO** | **# Correct** | **Percentage** | **Average for same MPO** |
| 81 | **2.2** | 14 | 58 |  |
| 82 | **2.2** | 13 | 54 |  |
| 83 | **2.2** | 15 | 63 |  |
| 84 | **2.2** | 8 | 33 |  |
| 85 | **2.2** | 6 | 25 |  |
| 86 | **2.2** | 11 | 46 |  |
| 87 | **2.2** | 13 | 54 |  |
| 88 | **2.2** | 12 | 50 |  |
| 89 | **2.2** | 19 | 79 |  |
| 90 | **2.2** | 11 | 46 |  |
| 91 | **2.2** | 17 | 71 |  |
| 92 | **2.2** | 20 | 83 |  |
| 93 | **2.2** | 12 | 50 |  |
| 94 | **3.3** | 16 | 67 |  |
| 95 | **3.3** | 22 | 92 |  |
| 96 | **3.3** | 21 | 88 |  |
| 97 | **3.3** | 19 | 79 |  |
| 98 | **3.3** | 19 | 79 |  |
| 99 | **3.3** | 19 | 79 |  |
| 100 | **3.3** | 17 | 71 |  |