5-Digit ID: Key

CHAPTER 9 WORKSHEET

MECHANISMS & CHARACHTERISTICS OF SPORTS TRAUMA

MATCHING—Match the following terms with the appropriate response.

M.	1. Avulsion fracture	A. A fracture resulting in three or more bone fragments
L.	2. Ball & socket joint	B. Tissue that connects muscle to bone
H.	3. Contusion	C. Can result in tissue adaptation to physical demands placed on the body
G.	4. Ecchymosis	D. Resistance to a load
D.	5. Stress	E. Inflammation of muscle tissue
C.	6. Strain	F. A fracture resulting from repetitive forces over time
A.	7. Comminuted fracture	G. Tissue discoloration (often black and blue)
K.	8. Ligament	H. A compression injury which often results in skin discoloration
N.	9. Capsulitis	I. This is the cause of the condition osteochondrosis
E.	10. Myositis	J. Muscle soreness occurring 2-3 days following exercise/training
I.	11. Aseptic necrosis	K. Tissue that connects bone to bone
O.	12. Hinge joint	L. The glenohumeral joint is one example of this type of joint
J.	13. DOMS	M. A fracture in which a ligament tears off part of a bone
F.	14. Stress fracture	N. Inflammation of a joint capsule
B.	15. Tendon	O. The elbow joint is one example of this type of joint

SHORT ANSWER

16. When a ligament is stretched, what injury may result due to the tension force? sprain

17. Crepitus is a crackling/grading/crunching feeling or sound.

18. If a muscle is overstretched by tension or forced to contract against too much resistance, separation or tearing of the muscle fibers occurs. This damage is referred to as a muscle strain.

19. Approximately 85% of all ankle injuries result from this action. inversion

20. Repeated contusions to the same area can cause small calcium deposits to accumulate which results in a condition called myositis ossificans.

21. The term for a separation of two articulating surfaces (joints) is diastasis.

22. Where are some common sites for stress fractures? Tibia, fibula, metatarsals, calcaneus, femur, ribs and humerus

23. Elasticity allows a tissue to return to its normal shape/length after mechanical deformation.

24. If a load exceeds a tissue's yield point, what results is mechanical failure or injury.

25. What is/are the difference(s) between acute or traumatic injuries and overuse injuries? Acute/traumatic injuries result in an immediate onset of sx/sy; Overuse injuries occur over time due to repetitive forces

LISTING

26. List and define the five types of tissue loading (forces).

Compression - loads towards ea other on the same plane
Tension - "pulls" or "stretches" tissues; opposite loads
Shearing - loads towards ea other but on different planes
Bending - combination of compression + tension
Torsion - "twisting" tissues; opposing rotational loads

27. What are two forces that can injure muscle tissue?

Tension (strains)
Compression (contusions)

28. Identify the following injuries as either *acute/traumatic* and/or *overuse* injuries. Provide the type of tissue or body part involved in the injury.

	Type of Injury	Tissue or Body Part Injured
Sprain	acute/traumatic	ligaments, jt. capsules
Strain	acute/traumatic	muscle tissue
Tendonitis	overuse	tendons
Abrasion	acute/traumatic	skin
Bursitis	overuse or acute	bursae
Fracture	acute/traumatic	bone tissue
Contusion	acute/traumatic	skin, muscle, bone, organs
Stress Fx	overuse	bone tissue
Dislocation	acute/traumatic	joints
Neuropraxia	acute/traumatic	nerves
Fasciitis	overuse	fascia
Laceration	acute/traumatic	skin

ESSAY

29. Which is more susceptible to injury, the muscle or its tendon? Why? The muscle is more susceptible to injury because tendon tissue is 2x stronger than muscle tissue.

30. Describe the "stress-strain curve" and how it is applicable to tissues of the body. It illustrates the stress/load a material/tissue can withstand prior to permanent deformation/mechanical failure. Different tissues have different yield points allowing for shorter/longer periods of stiffness and plastic changes based on its mechanical properties (elasticity).