

Bio-Mechanics:

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Q1(a) What is humeroulnar joint?
Explain different movement at (H-U) joint.

Ans No1(A) The humeroulnar joint (also humeral or trochlear joint) is part of the elbow joint. It is composed of two bones, the humerus and the ulna, and is the junction b/w the trochlear notch of the ulna and the trochlea of humerus. It is classified as a simple hinge joint which allow for movement of flexion, extension and circumduction. Due to the obliquity of the trochlea of humerus, this movement does not take place in the antero-posterior plane of the body of the humerus. Flexion in the humeroulnar joint is produced by the action of biceps brachii and brachialis, assisted by the brachioradialis with a tiny contribution from the muscles arising from the medial epicondyle of the

Humerus. Extension in the humeroradial joint is produced by the Triceps brachii and ~~the~~ anconeus Muscles with a tiny contribution from the muscles arising from the lateral epicondyle of the humerus. Such as the extensor digitorum muscle.

Q1(B)

What is humeroradial joint, explain different movements at the joint.

Ans 1
(B)

The humeroradial joint is the joint b/w the head of the Radius and the Capitulum of the humerus, is a limited ball-and-socket joint.

Hinge-type of synovial joint the humeral radial joint - are hinge-joints and are capable of flexion and extension of the elbow - flexion involves the movement of the hand of forearm forward toward the shoulder via rotation around the joint.

Q1(C)

What is carrying angle why it is important?

Ans-1
(C)

Carrying angle is a small degree of cubit valgus

formed b/w the axis of
✓ Radially deviated forearm
and the axis of ✓ the
Humerus. It helps the ~~term~~
arm to swing without
hitting the hip while walking.
Normally it is 5-15° away
from the body or 165-175°
✓ towards the body.

Q2(a) What is wrist complex?
Explain joint contribution
and ROM of wrist
complex?

Ans 1
(A) The wrist complex the
wrist (carpus) consist
of two compound joint
✓ the radio carpal and the
mid carpal joints, referred
to collectively as the
wrist complex.

Q2(b) What is the Carpal Tunnel
Syndrome?

Ans 2
(B) Carpal tunnel syndrome is
a common condition that
causes pain, numbness
and tingling in the hand
and arm. The condition
occurs when one of the
major nerves to the hand
the median nerve is

Squeezed as it travel
through the ~~to~~ wrist.

Q3(a) Write Down Definition of
Muscle Twitch, Summation Refractory

Ans 3
(A)

A Muscle Twitching is
also called muscle

fasciculation - twitching
involve small muscle

contraction in the
body - you muscle are

made up of fibers
that your nerve control.

Stimulation or damage
to a nerve may cause

your muscle fibers to
twitch - most muscle

twitches go unnoticed
and aren't cause for

concern - summation
occurs as successive

stimuli are added
together to produce a

stronger muscle
contraction

Period during which a
nerve or muscle is

incapable for responding
of stimulation is called

muscle refractory
period

Q3(B)

Explain types of Muscle
Contraction with examples
in your own words.

Ans 3
(B)

Isometric: A Muscular
Contraction in which the
length of the muscle

does not change.

"Eccentric": An isotonic
Contraction where the

Muscle lengthens.

Concentration: An isotonic

Contraction where the
Muscle shortens

Q3(G)

In Grade III Muscle strain
Why we can't feel pain?

Ans
3(G)

Because the occurrence
Complete rupture of
the muscles and
tendon's or the muscle
belly separates in part's

Q4(G)

What is different b/w Cranial and

Q4(G)

Spinal Nerve - How ventral and
Dorsal rami form ventral Dorsal Root

Ans 4
(G)

Spinal nerves come from
Spinal Cord and have
31 pairs and Cranial nerves
come from brain and
have 12 pairs.

The dorsal and ventral

Root combine shortly after
emergency and from spinal
Nerve which divide
into dorsal and ventral
ramus to supply the
anterior and posterior
surface of the body.

Q4(B) What is different b/w
Neuropria and Neurotmesis,
and Neurotmesis?

Ans
4(B) Neuropria - mild injury
of Nerve only conduction
problem but Nerve
remain intact ~~and axon~~
axontomesis --- peripheral
nerve of entire damage
no detract type of
injury of nerve but
epineurium, endoneurium and
perineurium, remain intact
neurtomesis - severe nerve
damage along with nerve
occures in this type.

Q5(a) What is Wolff's Law?

Ans
5(A) Wolff's Law states that
your bones adapt based
on the stress or demand
place on them. When

you work bone - in Response
your bone tissue ^{Re-} models
and be - Comes Stronger

Q5(B) How fracture repair - Explain
different stage?

Ans 5
Healing of the fracture
is called fracture
Repair. Some bone can
heal by wearing a cast
other may require more
~~fast~~ invasive treatments.

Such a bone fracture
Repair - Bone fracture repair
Surgery - to fix a broken
bone using metal
Screws, pins, rods, or plates
to hold the bone in place
it is also known as open
reduction and internal
fixation (ORIF) surgery.

- There are four stages
in the repair of broken
bone:
- 1) the formation of
Hematoma at the break
 - 2) the formation of a fibro-
cartilaginous callus
 - 3) the formation of bony
callus
 - 4) Remodeling and addition
of compact bone.