

DPT 2nd Semester (section A)

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Course Title: Biomechanics-I

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MID Term Assignment Marks: 30

Draw a table including all the muscles and their actions of the following joints.

Q1: Shoulder joint.

Answer:

Muscle	Actions
I. Subscapularis muscle	Shoulder extension , Abduction and Internal rotation.
II. Infraspinatus	Horizontal abduction of shoulder, Shoulder extension and External rotation.
III. Teres minor	Shoulder adduction and external rotation.
IV. Teres major	Internal rotation, Shoulder adduction and Shoulder extension.
V. Supraspinatus	Shoulder abduction and Stabilization of humerus.
VI. Deltoid	Shoulder flexion and extension, Internal and external rotation and shoulder abduction.
VII. Pectoralis major	Flexes the shoulder , Internal rotation and Abduction.

Q2: Elbow joint.

Answer:

Muscles	Actions
I. Pronator teres	Elbow flexion and pronation.
II. Brachioradialis	Flexes the elbow , Pronation and Supination.
III. Triceps brachi	Elbow extension.
IV. Brachialis	Flexes the elbow.
V. Anconeus	Elbow extension.
VI. Biceps brachi	Supination of forearm and flexes the elbow.
VII. Supinator	Supination of the forearm.
VIII. Pronator quadratus	Pronation of forearm and maintains radius.

Q3: Wrist joint.

Answer:

Muscles	Actions
I. Flexor pollicis longus	Flexion of thumb and wrist.
II. Flexor carpi ulnaris	Ulnar deviation of wrist and Flexion of thumb.
III. Flexor digitorum superficialis	Flexion of finger and wrist.
IV. Flexor carpi radialis	Flexes the wrist and Abduction of wrist.
V. Extensor digitorum communis	Wrist and fingers extension.
VI. Extensor pollicis longus	Wrist and thumb extension.

VII.	Extensor carpi ulnaris	Abduction of wrist and wrist extension.
VIII.	Extensor carpi radialis longus	Abduction and extension of wrist.
IX.	Extensor carpi radialis brevis	Abduction and extension of wrist and also weak extension of elbow.

