**Final-Term Assignment/Paper (spring -020)**

**Human Anatomy-II**

**BS Radiology Sec-A 2nd Semester)**

**Instructor: Dr. M.Jaffar**

**Time: 6-hours (9am-3pm) Max**

**Marks: 50**

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**Parograme BS Radiology**

Q1. Write anterior compartment of thigh and posterior compartment of leg muscles with origin, insertion and action. (10)

Ans1):**Anterior compartment of thigh:**

Anterior compartment of thigh consist of 4 muscles.

1)**Saratorious:**

Origin: anterior superior iliac spine.

Insertion: medial tibia.

Action: flex,abduct,lat rotate thigh.

2**)Tensor fascia lata:**

Origin: Anterior superior iliac spine.

Insertion: lliotibical band.

Action: Anduct and help in stabilize and steady the hip and knee joints by putting

Tension on the lliotibial band of fascia.

3)**Articularus genus:**

Origin: femur

Insertion: Suprapatellas bursa

Action: pulling the suprapatellas bursa during extension of the knee.

4)**Quadriceps femoris:**

It is further divided into

**\*Rectus femoris:**

Origin: Anterior inferior iliac spine margin of acetabulum.

Insertion: patella and tibial tuberosity via the patellar ligament.

Action:Extend knee,flexes thigh.

**\*vastus lateralis:**

**\*vastus medialis:**

**\*vastus intermedius:**

Origin: femur

Insertion: patella and tibial tuberosity via the patellar.

Action: Extend knees.

**Posterior compartment of leg**:

Posterior compartment of leg consist of

1**)popliteus:**

Origin: lateral condyle of femur.

Insertion:posteriorly on medial condyle of tibia.

Action: initiate knee flexion.

2)**flexor digitorum longus**:

Origin: middle 1/3 of the posterior surface of the tibia.

Insertion: Base of the distal phalanges of each of lateral four toes.

Action: toe flexion,inversion of the foot.

3)**Flexor hallucis longus:**

Origin: distal 2/3 of posterior surface of shaft of fibula.

Insertion: plantar surface of base of distal phalanx

Action: planter flexion at ankle joint.

4)**Tibialis posterior:**

Origin: posterior surface of tibia and fibula and interosseous membrane.

Insertion: tuberosity of navicular,all cuniforms

Action: plantar flexea and inversts foot.

Q2. Define the following (10).

1. **Endocrine gland**

A gland that secretes hormones directly into the blood stream.it is a ductless gland.

Example:

Adrenal gland

Pituary gland

1. **Exocrine gland**

A gland that secretes products into ducts which empty into body cavities or body surface.

Example:

Sweat gland.

Salivary gland.

1. **Thalamus**

The thalamus is a large paired,ovoid mass of nuclei located in the diencephalan and form the upper 2/3 of the lateral wall of the third ventricle.

1. **femoral triangle**

The femoral triangle is a hollow area in the anterior thigh.many large neurovascular structure pass through area,and can be accessed realtively easily,thus it an area of both anatomical and clinical importance.

Q3. Write the Extraocular muscles. Enlist both voluntary and involuntary. (10)

Ans:)**Extraocular muscles**:

Extraocular muscles are located within the orbit,but are extrinsic and separate from the eyeball itself,they act to control the movements of the eyeball and the superior eyelid.

**Voluntary muscles:**

1)Superior rectus

2)inferior rectus

3)Medial rectus

4)Lateral rectus

5)Superior rectus

6)inferior rectus

7)Levator palpehrae superioris

**Involuntary muscles:**

1)Superior tarsal or muller's muscle

2)Inferior tarsal muscles.

Q4. Describe the arches of foot and functions of arches. (10)

Ans4:)**Arches of the foot:**

Bones of the foot are arranged to form three strong arches.

1)Two longitudnal(lateral and medial).

2)One transverse.

Arches are fully developed at the age of 12 or 13.

**Lateral longitudnal arch:**

Lateral longitudnal arch is composed by the calcaneum cuboid and lateral 2 material.

It is characteristically low and just about touches of the earth.

**Medial longitudnal arch**:

The medial longitudal is composed by the calcaneum talus navicular,3 cuneiforms and medial 3 metatarsals.

**3)Transverse arch:**

It runs across the midfoot lies at the level of transo-material joints.

Formed of bases of all metatarsal bones,coboid and 3 cuneiform bones.

**Function of arches:**

1)Body weight distribution.

2)They act as a locomative part of the body in walking and running.

3)They provide support and flexibility to the foot.

4)Act as a shock absorber in steeping and particularly in jumping.

5)They provide space in the sole of the foot to contain and protect

the muscles nerves of blood vessels of the sole.

Q5. Write a note on cerebrum, its lobes and functions. (10)

Ans5:)**Cerebrum:**

It is divided into two halves called cerebral hemisphere.

They communicate via corpus collasum.

Cerebral cortex is the outer region of cerebrum.

**Lobes of cerebrum:**

**Frontal lobe:**

Most anterior portion of the cerebrum."central sulcus"separate frontal and parital lobe.

Control motor function,personality and speech

**Parietal lobe:**

The most superior portion of the cerebrum(top of head).

Recieve sensory input from the skin(touch,pressure,temperature and pain)

**Occipital lobe:**

The most posterior portion of the cerebrum (back of the head)

Recieves input from the eyes and controls vision.

**Temporal lobe:**

The left and right lateral portion of the cerebrum.

Control hearing and skin.

**Function of the cerebrum**:

1)it helps in movement.

2)it controls speech.

3)it is responsible for sensory processing.

4)it determines the intelligence of the being.