MSK Musculo-skeletal module

Research1

Give an account of :

1. Anatomy of the brachial plexus.
2. Anatomy of the sciatic nerve.
3. Anatomy of the femoral triangle.
4. Anatomy of ankle joint
5. As regard the cartilage: discuss histological general structure of all types and detailed cellular components by light and electron microscopes.
6. As regard the thin skin describe in details the general structural arrangement of layers with the associated appendages and detailed structure of each cellular component by light and electron microscope.
7. The physiological anatomy of myoneural junction, describing in details the steps and properties of neuromuscular transmission.
8. Osteomyelitis: Etiology, diagnosis and treatment
9. Fungal infection of skin diseases: Etiology, diagnosis and treatment
10. Classification and pathology of bone tumors
11. Compare between
    Pancuronium (a competitive neuromuscular blocker) and Succinylcholine (a depolarizing neuromuscular blocker) regarding the following items :
    Mechanism of action, Effect on cardiac muscarinic receptors, Fasciculations, Effect of Neostigmine, Adverse effects
12. Compare between
    a) Lesions due to urban and rural cutaneous leishmaniasis
    b) Onchocerca volvulus and Loa loa infections as regard (mode of infection, vector, microfilaria, clinical picture, diagnosis).
    c) Trichinella spiralis and Dracunculs medinensis infections as regard (life cycle, mode of infection, infective stage, clinical picture, diagnosis).
    d) Specific myiasis and semispecific myiasis (definition and two examples of each).
    e) Lesions due to Sarcoptes scabiei and follicle mites

Research 2

Give an account of :

1. Anatomy of the axilla.
2. Anatomy of rotator cuff muscles.
3. Anatomy of radial nerve.
4. Anatomy of knee joint.
5. As regard the bone: discuss histological general structure of both types and detailed cellular components by light and electron microscopes.
6. As regard muscular tissue: describe the different features of the general structure of different types of muscles by light microscope in addition to discussing the detailed structure of skeletal muscle by electron microscope.
7. The steps of excitation- contraction coupling, and the factors affecting skeletal muscle contractions with illustrations whenever possible.
8. Myositis: Etiology, diagnosis and treatment
9. Bacterial skin diseases: Etiology, diagnosis, prevention, and treatment
10. Types and pathology of osteodystrophies
11. Therapeutic agents used of gouty arthritis as regard: Classification of drugs, The mechanism of action of Colchicine and Febuxostat and the adverse effects of each
12. Compare between
    a) Lesions due to urban and rural cutaneous leishmaniasis
    b) Onchocerca volvulus and Loa loa infections as regard (mode of infection, vector, microfilaria, clinical picture, diagnosis).
    c) Trichinella spiralis and Dracunculs medinensis infections as regard (life cycle, mode of infection, infective stage, clinical picture, diagnosis).
    d) Specific myiasis and semispecific myiasis (definition and two examples of each).
    e) Lesions due to Sarcoptes scabiei and follicle mites

Research 3

Give an account of :

1. Anatomy of the cubital fossa.
2. Anatomy of gluteal muscles.
3. Anatomy of median nerve.
4. Anatomy of shoulder joint.
5. As regard the bone: discuss histological general structure of both types and detailed cellular components by light and electron microscopes.
6. As regard muscular tissue: describe the different features of the general structure of different types of muscles by light microscope in addition to discussing the detailed structure of skeletal muscle by electron microscope.
7. Arthritis: Etiology, diagnosis and treatment
8. Bacterial skin diseases: Etiology, diagnosis, prevention, and treatment
9. pathology of types of arthritis
10. Treatment of osteoporosis regarding the role of each of the following : A-Denosumab B- Cinacalcet C-Bisphosphonates D-Teriparatide
11. **Case study:**

A 35 years old woman visits her physician because of double vision, dropping of the upper eyelid (ptosis), and difficult chewing and swallowing, later on she suffered general weakness of her limbs. Her symptoms are made worse with exercise and occur most frequently late in the day. Testing indicates the presence of anti-acetylcholine antibodies in the plasma and normal CT scan of the brain and the eye orbit.

a) What is the initial diagnosis?
b) What is the cause of muscle weakness?
c) What is the possible treatment of this case?
d) Explain the reaction of denervation and how the electrical activity of the motor units can be measured.

12. **Compare between**

a) Lesions due to urban and rural cutaneous leishmaniasis
b) Onchocerca volvulus and Loa loa infections as regard (mode of infection, vector, microfilaria, clinical picture, diagnosis).
c) Trichinella spiralis and Dracunculs medinensis infections as regard (life cycle, mode of infection, infective stage, clinical picture, diagnosis).
d) Specific myiasis and semispecific myiasis (definition and two examples of each).
e) Lesions due to Sarcoptes scabiei and follicle mites

Research 4

Give an account of :

1. Anatomy of carpal tunnel.
2. Motor and sensory nerve supply of the hand.
3. Anatomy of the Guy rope muscles.
4. Anatomy of arches of foot.
5. As regard the cartilage: discuss histological general structure of all types and detailed cellular components by light and electron microscopes.
6. As regard the thin skin describe in details the general structural arrangement of layers with the associated appendages and detailed structure of each cellular component by light and electron microscope.
7. The main proteins that play a key role in muscle contraction and the steps of excitation- contraction coupling.
8. Viral infections of skin rash: Etiology, diagnosis and treatment
9. Surgical wound infections: Etiology, diagnosis, prevention, and treatment
10. pathology of skin tumors
11. H1 antagonists (antihistaminic agents) as regard: Classification, example of drugs, Advantages of second generations versus first generation

12. Compare between

a) Lesions due to urban and rural cutaneous leishmaniasis
b) Onchocerca volvulus and Loa loa infections as regard (mode of infection, vector, microfilaria, clinical picture, diagnosis).
c) Trichinella spiralis and Dracunculs medinensis infections as regard (life cycle, mode of infection, infective stage, clinical picture, diagnosis).
d) Specific myiasis and semispecific myiasis (definition and two examples of each).
e) Lesions due to Sarcoptes scabiei and follicle mites