CLASS XI BIOLOGY

DIGESTION AND ABSORPTION

DISORDERS OF MUSCULAR AND SKELETAL SYSTEM

DISORDERS OF MUSCULAR AND SKELETAL SYSTEM

• Myasthenia gravis:

Auto immune disorder affecting neuromuscular junction leading to fatigue, weakening and paralysis of skeletal muscle. Auto antibodies against Ach receptors.

• Muscular dystrophy:

Progressive degeneration of skeletal muscle mostly due to genetic disorder.

• Tetany:

Rapid spasms (wild contractions) in muscle due to low Ca²⁺ in body fluid.

Sprain

Sprain refers to injury to a joint capsule, typically involving a stretching or tearing of tendons or ligaments.

• Arthritis:

Arthritis refers to inflammation of the joints. It is a common disease of the old age. Its common symptoms are pain and stiffness in the joints. It is differentiated in three given forms:

- **(a) Osteoarthritis:** Secretion of the lubricating synovial fluid between the bones at the joint stops. The smooth cartilage covering the ends of the bones at the joint wears out due to years of use and is replaced by uneven bony spurs. The joint becomes inflamed, its movement becomes painful, and its function is diminished.
- **(b) Rheumatoid arthritis:** It is a chronic painful inflammation of the synovial membranes of many joints simultaneously
- **(c) Gout:** It is an inherited disorder of purine metabolism, occurring especially in men. Body forms excess amounts of uric acid and the crystals of sodium urate are deposited in the synovial joints, giving rise to a severe arthritis.

• Osteoporosis:

Osteoporosis is reduction in bone tissue mass causing weakness of skeletal strength (G.osteon = bone, poros = pore, osis = condition). It results from excessive resorption of calcium and phosphorous from the bone.

• Dislocation:

Dislocation is displacement of bones from their normal positions at a joint, for instance, slipping out of the ball of one bone from the socket of another bone into which it is fitted.

• Slipped disc:

Slipped disc is a displacement of vertebrae and the intervertebral fibrocartilage disc from their normal position. It may result from mechanical injury or defects of ligaments holding the vertebrae together.

CLASS XI BIOLOGY

• Fracture:

Fracture is a break of a bone. Bone fractures are of many types –

- (a) Green-stick fracture: It is merely a crack. The bones remains partly intact, occurs only in children.
- **(b)** Simple or complete fracture: Bone breaks completely into two parts which remain close to each other.
- **(c)** Comminuted fracture: Bone breaks into more than two pieces smaller fragments between two main fragments.
- (d) Compound fracture: Bone breaks completely but a fragment pierces out through the skin.
- **(e)** Evulsive fracture: A small piece breaks off fully from the bone but remains attached to the ligament.
- **(f)** Fractures need surgical treatment for healing and should be promptly and properly attended.

