Functions of Bones

Functions of the Skeletal System:

i. Shape

The skeletal system gives the body its distinctive shape.

Vertebrates have a vertebral column that supports the central axis of their body.

ii. Support

The skeleton provides structural support to the internal organs, keeping them in place.

Backbone, pelvis, and legs:

- Support the entire body.
- Enable us to stand upright.

iii. Protection

The skeleton forms a protective framework around the delicate internal organs.

Examples:

- **Skull:** Protects the brain.
- **Rib cage:** Protects the heart and lungs.
- **Vertebral column:** Protects the spinal cord.

iv. Movement

Bones, along with ligaments, tendons, and muscles, enable body movements.

Muscle pairs:

- Muscles usually work in pairs to create movement.

Example:

- Biceps (front of the arm) and triceps (back of the arm) work together:
- **Biceps contract:** Arm is lifted.
- **Triceps contract:** Arm is straightened.

v. Blood Cell Production:

Bones contain a spongy tissue called bone marrow.

Red bone marrow:

- Produces red blood cells (RBCs).
- Around 5 billion RBCs are produced daily.

Interesting Facts About Bones:

The smallest bone in the human body is located in the ear.

Bones stop growing around the age of 20, but they continuously rebuild new bone cells.

Red bone marrow can produce around 5 billion red blood cells each day.

Bones are extremely light yet strong, making them superior to most man-made substances.

Calcium deficiency:

- When the body lacks calcium, it draws calcium from the bones, making them weaker.
- Therefore, it is important to consume calcium-rich foods (e.g., milk) regularly.