

- Q1 Define the terms :-
- Organ** :- An organ is a group of tissues that perform a specific function.
 - Tissue** :- Tissues are composed of cells, not necessarily identical but of the same origin.
 - Cell** :- Cell is the smallest and functional unit of life.

Q2 Define Anatomy and Physiology?

Anatomy - Anatomy is a branch of biology which studies the human body structure, its shape and interrelation of various parts of the body.

Physiology - Physiology is the science of mechanical, physical, bioelectrical and biochemical functions of human organs and the cells.

Q3 Define Skeletal System? Write main systems of the human body?

Cartilage

Skeletal System consists of bones and joints which provide attachment to the movement of muscles.

Main systems of the human body :-

- | | |
|-------------------------|---------------------------|
| i) Skeletal System | vi) Nervous System |
| ii) Muscular System | vii) Excretory System |
| iii) Circulatory System | viii) Reproductive System |

TOPIC:..... Chapter 1 - Human Anatomy & Physiology

TEACHER'S NAME: Ms. Kusum Thakur

- iv) Respiratory System ix) Glandular System
v) Digestive System

Q4 Define the systems of the human body?

- i) Muscular system :- It consists of muscles, tendons, ligaments etc. It provides movement to body through its contraction.
- ii) Circulatory System - It consists of blood, blood vessels, heart etc. It provides fluid movement in the body.
- iii) Respiratory System - It consists of breathing organs like lungs, trachea, alveoli etc. It helps in energy production.
- iv) Digestive System - It consists of digestive organs like the stomach, food pipe, intestine. It helps in energy production.
- v) Nervous System - It consists of brain, spinal cord and nerves. It controls the working of various organs of the body.
- vi) Excretory System - It consists of Kidneys, skin etc. It helps in excreting wastes from the body.
- vii) Glandular System - It consists of endocrine and exocrine glands like liver, pancreas, thyroid, pituitary, intestine.

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TOPIC:..... Chapter - 1 Human Anatomy & Physiology.....
TEACHER'S NAME: Ms. Kusum Thakur

It helps various organs to work properly.

Q5 Write importance of Anatomy and Physiology?

- i) It gives knowledge about our body.
- ii) It ~~helps~~ helps to understand the body structure properly.
- iii) Understanding the body Organs -
- iv) It helps to improve Health.
- v) It prevents Health Problems
- vi) These subjects help the individual to improve the efficiency of various systems.

Q6 Write four functions of Skeleton System?

- i) Support
- ii) Shape
- iii) Protection and Production of Blood Cells.
- iv) Protection
- v) Movement

OR.

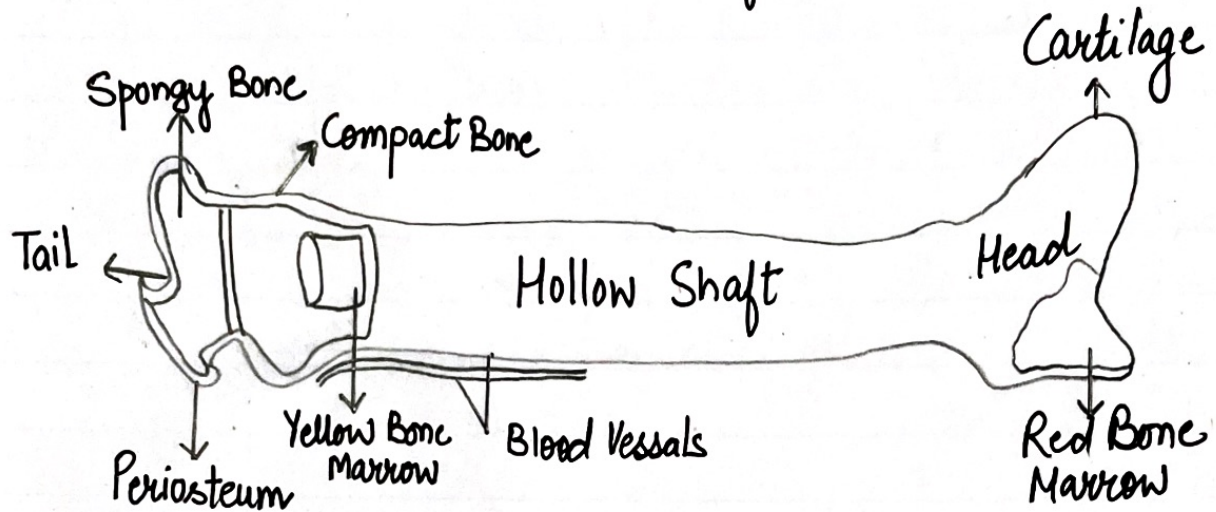
- i) It provides supporting framework to the body.
- ii) It provides shape and structure to the individual.
- iii) Bones are capable of manufacturing of Red blood cells in the blood.
- iv) Bones protect the delicate internal organs of the body like skull bones protect brain.
- v) Bones act as a lever and provide movement of muscles.

Q7 How many bones in human body?

206 bones in human body.

Q8 Draw the internal diagram of bone?

Internal Structure of Bone



Q9 What is Cartilage? Write its Types?

Cartilage is a connective tissue consists of a dense matrix of collagen fibres and elastic fibres.

There are three types :-

- i) Hyaline Cartilage
- ii) Fibrous cartilage
- iii) Calcified / Elastic cartilage.

Q10 State the various types of bones. Explain.

a) Long Bone - They are long and wide. They act as lever. They have long shaft and are found in legs and arms like femur and humerus bones.

b) Short Bone - They are short in size and cube shaped. They are found in wrist and phalanges (fingers)

- c) Flat Bones - Flat bones have broad surface. They mostly protect our organs and give attachment to muscles like sternum (breast bone), scapula (shoulder blade).
- d) Irregular Bones - These bones have irregular shape like vertebrae, skull etc.
- e) Sesamoid Bone - These bones are embedded in tendons. They hold the tendons like patella (knee cap).
- f) Cartilaginous Bone - These are flexible and soft. They are found in ear and nose.

Q11 Define joints? What are the types of joints? Explain.

Joint - Joints are the union of two or more bones meet or join at one place.

Joints are of three types :-

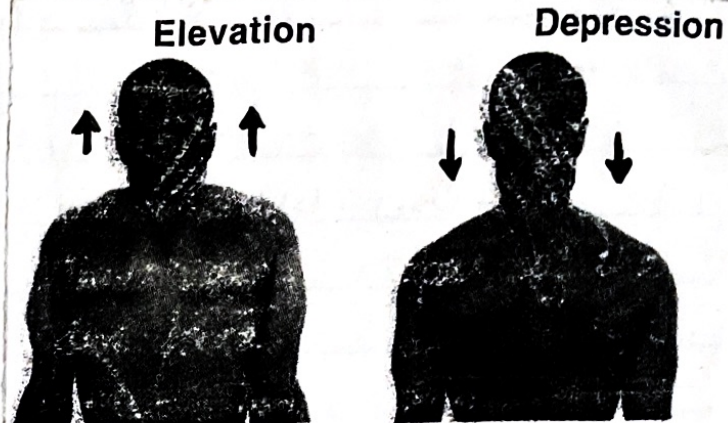
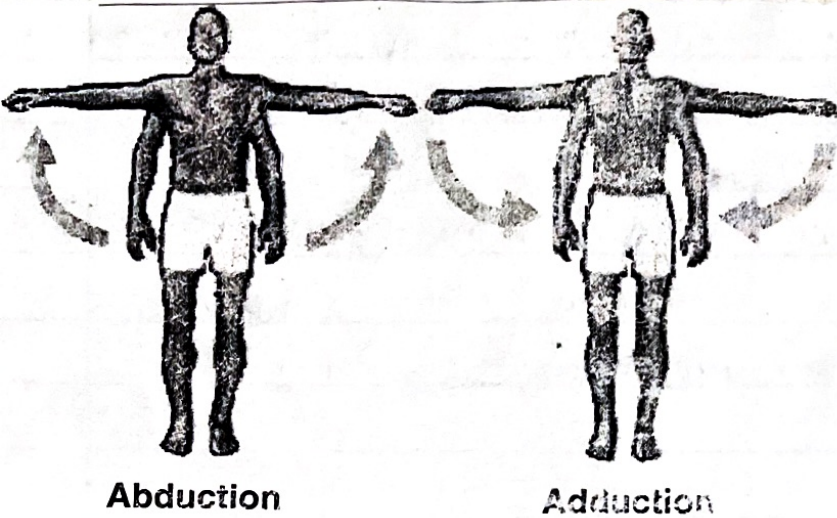
- i) Immovable or Fibrous joint :- They are also known as fixed joints. Bones are joined together and no movement is possible like skull joint.
- ii) Slightly Movable or Cartilaginous joints :- There is a slight movement like intervertebral disc.
- ii) Freely Movable or Synovial Joints :- These joints can move to great extent. These are covered by thin membrane and filled by synovial fluid. They are further divided into five types
 - a) Ball and socket joint (Shoulder and hip joint)
 - b) Hinge joint (Elbow Joint)
 - c) Pivot joint (Neck Joint)

CLASS 9th

SUBJECT: Physical Education

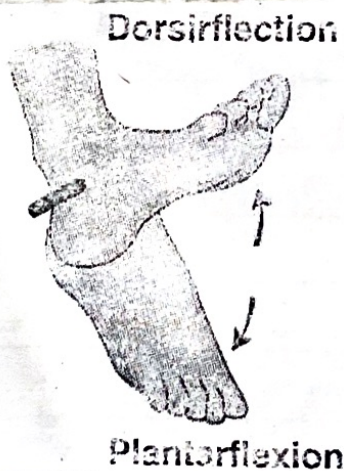
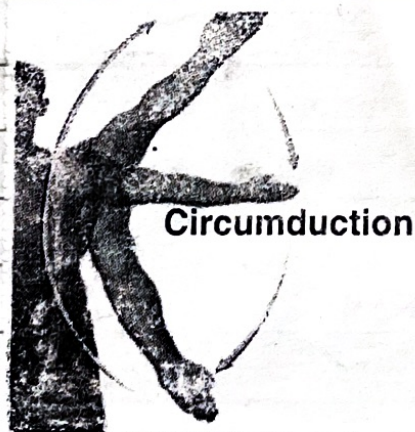
TOPIC: Chapter 1 Human Anatomy & Physiology

TEACHER'S NAME: Ms. Kusum Thakur



vii) **Rotation** - Rotation is the movement towards body centre line. It is the pivoting of a bone on its own axis. For example, turning the head from side to side or moving the trunk from side to side.

viii) **Circumduction** - It is a circular motion of a body part. Circumduction can be best performed at ball and socket joints, such as the hip and shoulder, fingers, hand, feet and head.



15) **Explain the terms :-**

- i) **Osteocytes** - Bone cells are called Osteocytes.
- ii) **Bone Marrow** - It is flexible tissue. It is found in the hollow interior of bones.

CLASS.....9th.....

SUBJECT: Physical Education

TOPIC: Chapter 1 Human Anatomy & Physiology

TEACHER'S NAME: Ms. Kusum Thakur

iii) Ligament - It is tough, non elastic yet flexible white fibrous of bone tissue

OR

It connects two or more bones together at the joint.

iv) Tendons - Tendons attach muscle to bone it is made up of fibrous connective tissue.

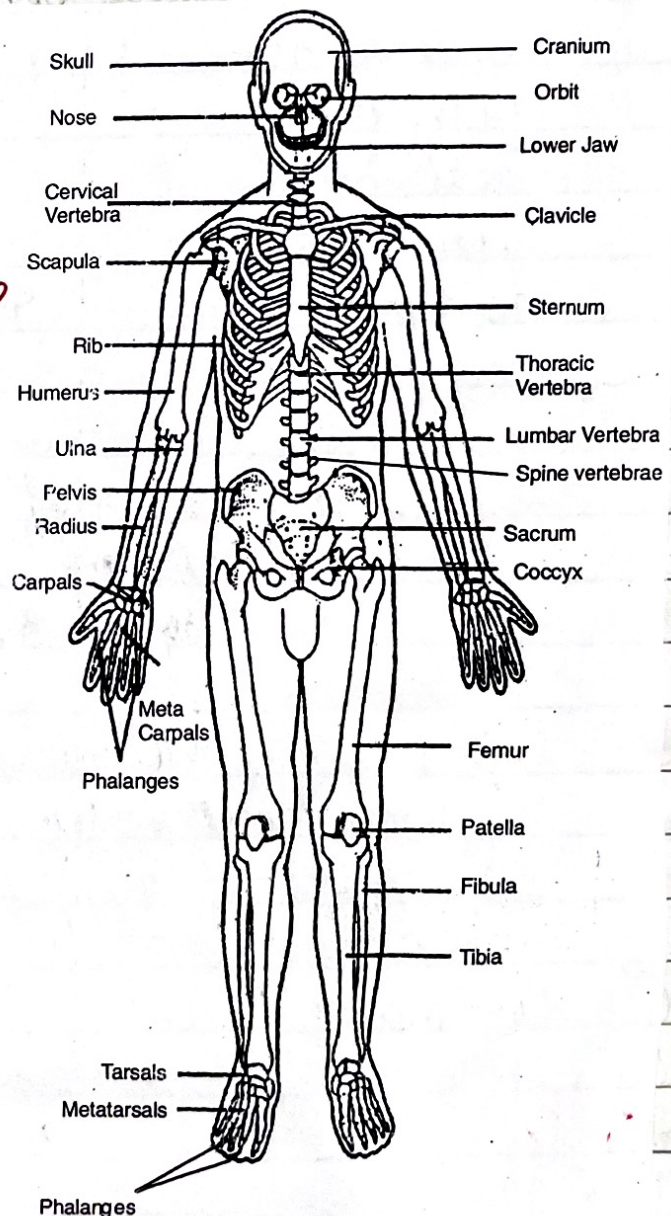
Q16 Name the four basic types of tissue.

- i) Epithelial tissue
- ii) Connective tissue
- iii) Muscle tissue
- iv) Nervous tissue

Q17 Write two types of human skeleton?

- 1) Axial skeleton
- 2) Appendicular skeleton.

Q18 Draw the diagram of skeletal system



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TOPIC:.....Chapter 1.....Human Anatomy and Physiology.....

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Q25 What is Rib Cage?

Twelve pairs of ribs which along with thoracic vertebrae and the breast-bone constitute the bony cage or rib cage.

Q26 Define the term scapula and humerus?

Scapula — It is broad and triangular shaped bone. It is situated in the upper part of the back.

Humerus — Humerus is a long bone. Its upper end is round which sets on the clavicle. It is lower and joins to both the bones of the forearm and forms elbow joint.

Q27 Describe the bones of Fore-arm?

1. Radius — It is a big bone in the front position of the arm on one side of the thumb.

2. Ulna — Ulna is in the middle part towards the smallest finger.

3. Carpal bones — The bones of the arm joint are called carpal bones. (Wrist)

4. Meta-carpal bones — These are the bones of the palm and are present in the five fingers.

5. Bones of the fingers or phalanges — The fingers bones are called phalanges. There are in all 14 bones in the fingers. Each finger has 3 bones and the thumb has two.

CLASS.....

9th

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TOPIC:.....

Chapter - 1 Human Anatomy & Physiology..

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Patella - The patella is derived from latin means small plate. It is also known as the kneel cap. It is a thick, flat circular triangular bone. It is situated on the front of the knee joint. It is the largest sesamoid bone.

Fibula - The fibula or calf bone is the long, thin and lateral bone of the lower leg. It runs parallel to the tibia or shin bone. It is smaller of the two bones.

Tibia - The tibia is also known as the shin bone. It is the larger and stronger of the two lower leg bones. It forms the knee joint with femur and the ankle joint with the fibula and tarsus.

Students write these all questions & Answers in your Notebook
Thank you.