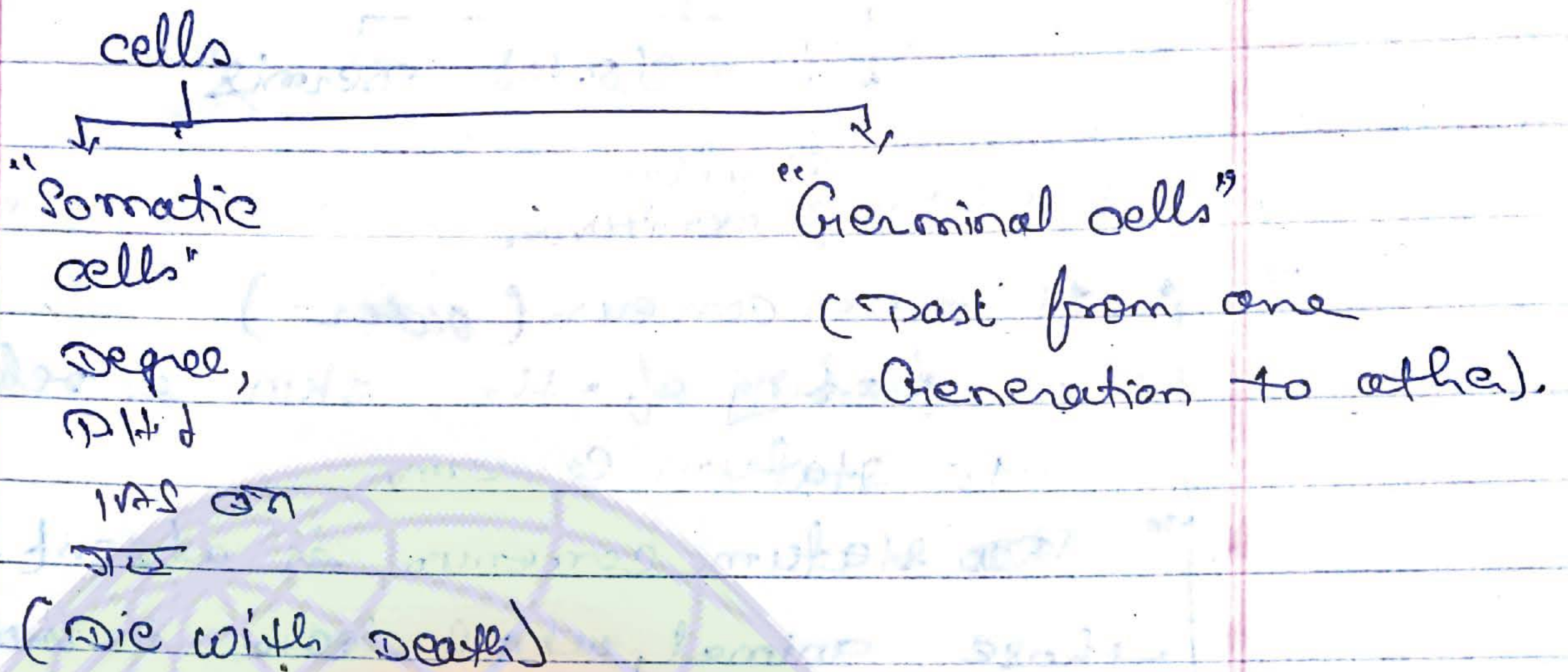


(i)



②

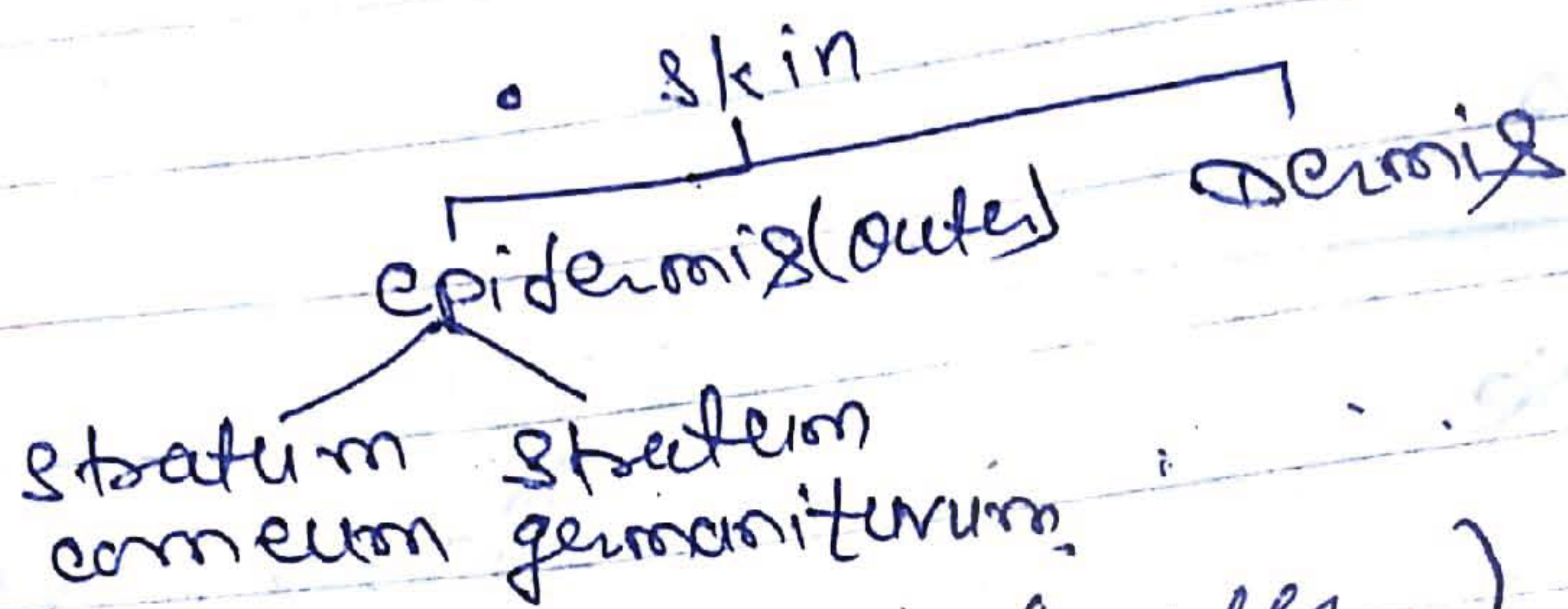
Human body: -

- (i) Skin (Integumentary system)
- (ii) skeleton system
- (iii) digestive system
- (iv) Respiratory system
- (v) circulatory system
- (vi) Excretory system
- (vii) Locomotion (muscles)
- (viii) Nervous system
- (ix) Endocrine system (like: hormones)
- (x) Reproduction system
- (xi) Embryo system

①

Skin → Skin is the largest organ of the body.

• It accounts for 6-7% of the body weight.



- The shedding of the skin is related to stratum corneum.
- ~~The~~ stratum corneum is absent in those animal, which live in water.
- It is ~~also~~ capable of division by mitosis.

• It contains a pigment called melanin

Stratum germinativum

• It is the inner most layer of skin.

• It is the layer which is capable of division.

• Below the dermis, there is present adipose tissue.

↳ consists with fat.

• Body utilizes ~~the~~ carbohydrate (1st)

↓
fats (2nd)

↓
proteins (3rd)

main energy

• Energy ranks ~~proteins~~ fat (1)

↓
Protein (2)

↓
Carb (3)

• Below the skin there is present a fatty layer of adipose tissue.

- Balance diet has main. main. of carbohydrate up to 62%.
- Carbohydrate stored in ~~liver~~ liver and muscles of the body.
- muscles are only reservoirs in the body where oxygen is stored.
- Doctor always recommends "Proteinaceous diet" b'coz proteins are not stored in the body, so it needs regular ~~eat~~ intake in diet.
- In our body ~~and~~ carbohydrate and fats are stored in the body.
- Fat stored in adipose tissue
Carbohydrate " " " " liver and muscles
Protein is not stored in body.
- Adipose tissue are not present in the body.
- Antioxidants remove free radicals in the body.

It is a small under " - not an

• Epidermis has pigment "melanin" (*)

• There is a pigment called melanin that is present in the epidermis. This pigment is formed in amino acid called "tyrosine" (A)

This pigment protect from ultra violet rays. more pigment darker is the colour (ii)

• There are two types of glands in body (3)

sweat gland.

sebaceous gland, (सीबीसीएस)

- merocrine glands are modified sweat glands. (4)

- Hair and nails are they are the derivatives of the skin. They contain a protein called "keratin". (2)

- "Arrector pili muscle" are related to form a blanket of hair on the skin. this is called goose flesh. (3)

→ X - emotional chromosome / male is donor
 Y - agyresine chromosome

Skeleton System

- (i) Females are emotional
- males are rational

(ii) skeleton - अर्थात् जिसके सघीर कुछ नहीं है।

(iii) skeleton

↓
 Axial skeleton (It lies on medium of the body)
 eg- skull, sternum, ribs, vertebral column,

↓
 Appendicular skeleton
 It lies on lateral sides of the body eg. arms, pelvic girdle,

(3) Cranial Capacity - अर्थात् Brain की capacity other animal से ज्यादा मानव का है।

(4) Cro-magnon man -

- modern man
- erect posture
- five fingers (अंगुली) होता है
- one uterus
- brain cranial capacity

(5) women fertile ⇒ 12 - 33 years
 ⇒ 1 egg / per month

So, $33 \times 12 \approx 396$
 ≈ 400 egg

(total produce)

Note! skull is made up of 25 bones (20 in man)

(6) man fertile \Rightarrow 12
 \Rightarrow 300 million sperm in
one stroke.

(7) Rape cases \Rightarrow 12 14 25
5 year but
marriage

(8) Bats are mammals
(Bats fly but mammals)
- Presence of hair
- Proper teeth
- melanin pigments

(9) Duck billed Platypus lay egg
but mammals

(10) Presence of "Diaphragm" in the
mammals
 \rightarrow mammals में ही सिर्फ diaphragm होता है

Anal system
Skull
Sternum and ribs
vertebral column

(i) skull - The skull is made up of 29 bones, it includes 6 ear ossicles

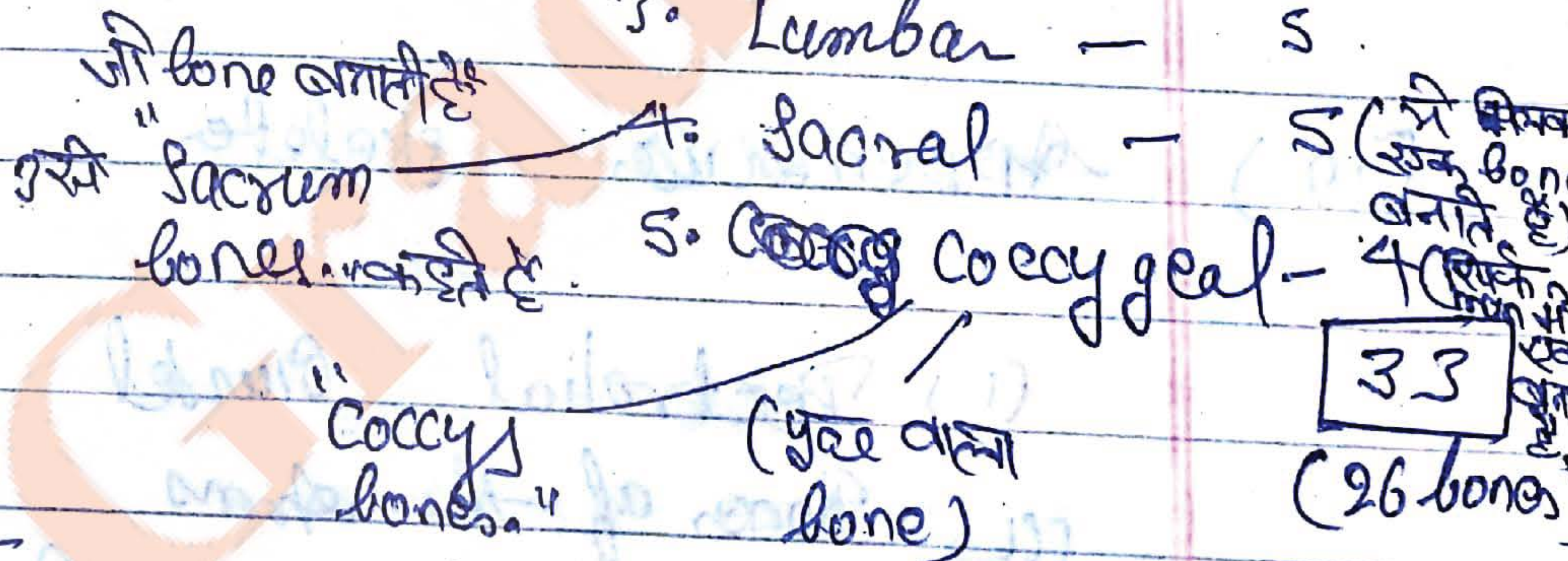
- 6 ear ossicles - 2 malleus ✓
2 incus ✓
2 stapes ✓

• Stapes is the smallest bones in the body.

• Skull is the hardest bone of the body.

(ii) Vertebral Column :-

- There are 33 vertebrae in the vertebral column.
- 5 types of vertebrae -



• There are 26 bones in the vertebral column

is a flat bone in chest

(11) Sternum and ribs! -
 There are 12 Pairs of ribs
 The first seven pairs are called true ribs
 8th, 9th and 10th are called false ribs. and
 11th and 12th are floating ribs.

Note: The floating ribs protect the kidneys.

- The tip of the sternum is called ~~to~~ "xiphoid".
- Caesarian: - Zulewa & Ceas was born

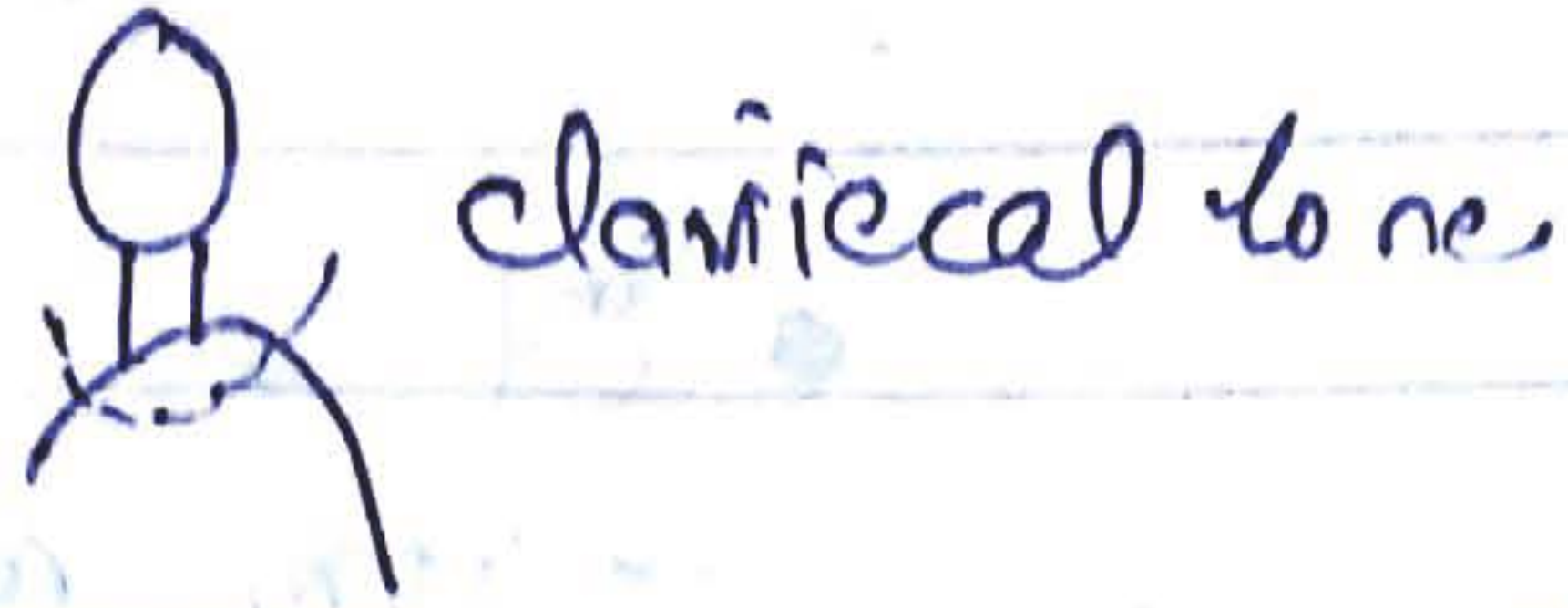
(12) Appendicular skeleton

- (i) Pectorial Girdle
- (ii) Bones of the arms
- (iii) ~~Pelvic~~ Pelvic girdle
- (iv) Bones of legs
- (v)

(i) Pectoral girdle -

It consists of two bones -

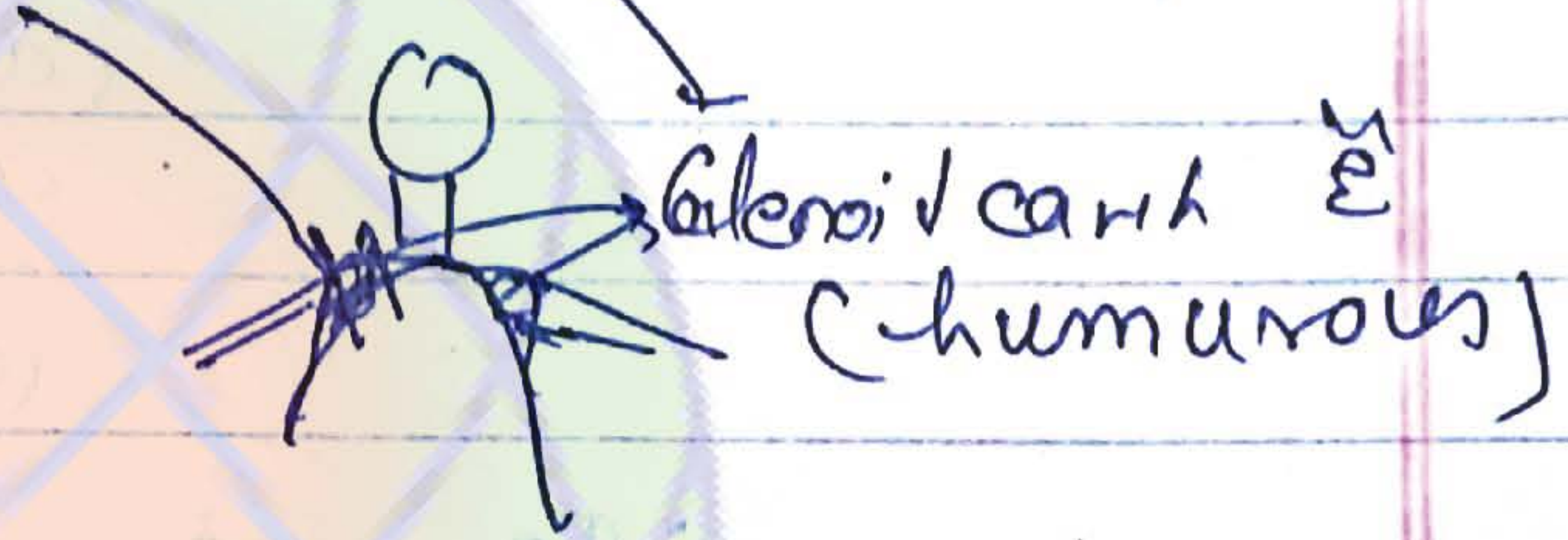
- (i) clavical
- (ii) scapula



clavical bone

clavical bone

• Scapula का चित्र



Glenoid cavity (humerous)

• There is Glenoid cavity in which the head of the ~~bone~~ femur is fitted. humerus.

(ii) Bones of the Arms :-

each arm of 30 bones -

• It consists of - (i) Humerus - (1)

(ii) one radius - (1)

(जो अंगुठा तक जाती है)

(iii) one ulna - (1)

(iv) ^{eight} Carpal bones - (8)

(v) five meta carpals - 5

(vi) five digits - (5)

~~with~~ flanges - (14)

Part of Pelvis

(iii) Pelvic girdle:-

• It is made up of 2 bones. They are called innominate bones.

Sheet of cartilage (horizontal flat)

• Each innominate bone is made up of 3 bones

- (a) Ilium ✓
- (b) Ischium ✓
- (c) Pubis

• There is present a depression called "acetabulum" in which the head of the femur is fitted.

(iv) Bones of the legs

(i) Femur - (1)

(ii) Tibia and Fibula - 2

(iii) 7 tarsal bones - 7

(iv) 5 meta tarsals - 5

(v) 5 digits with 14 phalanges - 14

(vi) One Patella - 1

30

Note! • The 206 bones in the human body.