

Reproductive system प्रजनन तंत्र

अलैंगिक जनन Asexual Reproduction

③ निषेचन नहीं होता है
fertilization not take
Place here

④ जीवों में विभिन्नतारु नहीं
पायी जाती हैं
Variation are not found

लैंगिक जनन sexual Reproduction

③ निषेचन की क्रिया होती है
fertilization take place here

④ जीवों में विभिन्नतारु अधिक पायी
जाती हैं
More variations are found

Q. 12

निषेचन fertilization

शुक्राणु व अण्डाणु कोशिकाओं के मिलन के द्वारा युग्मनज का निर्माण होना निषेचन कहलाता है।

"fission of sperm & ovum and formed zygote"

2 types प्रकार

आन्तरिक निषेचन Internal fertilization
बाह्य निषेचन External fertilization

Internal fertilization
आन्तरिक निषेचन

→ मादा शरीर के अंदर होता है
Inside the female Body

(Ex) पक्षी Bird
सरीसृप Reptiles
स्तनधारी mammals (मानव)
Human

External fertilization

बाह्य निषेचन

→ निषेचन शरीर के बाहर होता है
fertilization take place
out side from Body

(Ex) ① मेंढक frog

② बोननी मछली
Bony fish

[टिडल, डालफीन ⇒ आन्तरिक निषेचन
Internal fertilization]



FERTILIZATION

External Fertilization

Male Fish spreads over eggs

Female Fish Lays Eggs

Internal Fertilization

Ovum

Sperms

The diagram is divided into two main sections by a vertical line. The left section is titled 'External Fertilization' and shows a male fish (labeled 'Male Fish spreads over eggs') and a female fish (labeled 'Female Fish Lays Eggs') releasing eggs and sperm into the water. The right section is titled 'Internal Fertilization' and shows a large ovum (labeled 'Ovum') with several sperm cells (labeled 'Sperms') swimming towards it.

Female Fish Lays Eggs

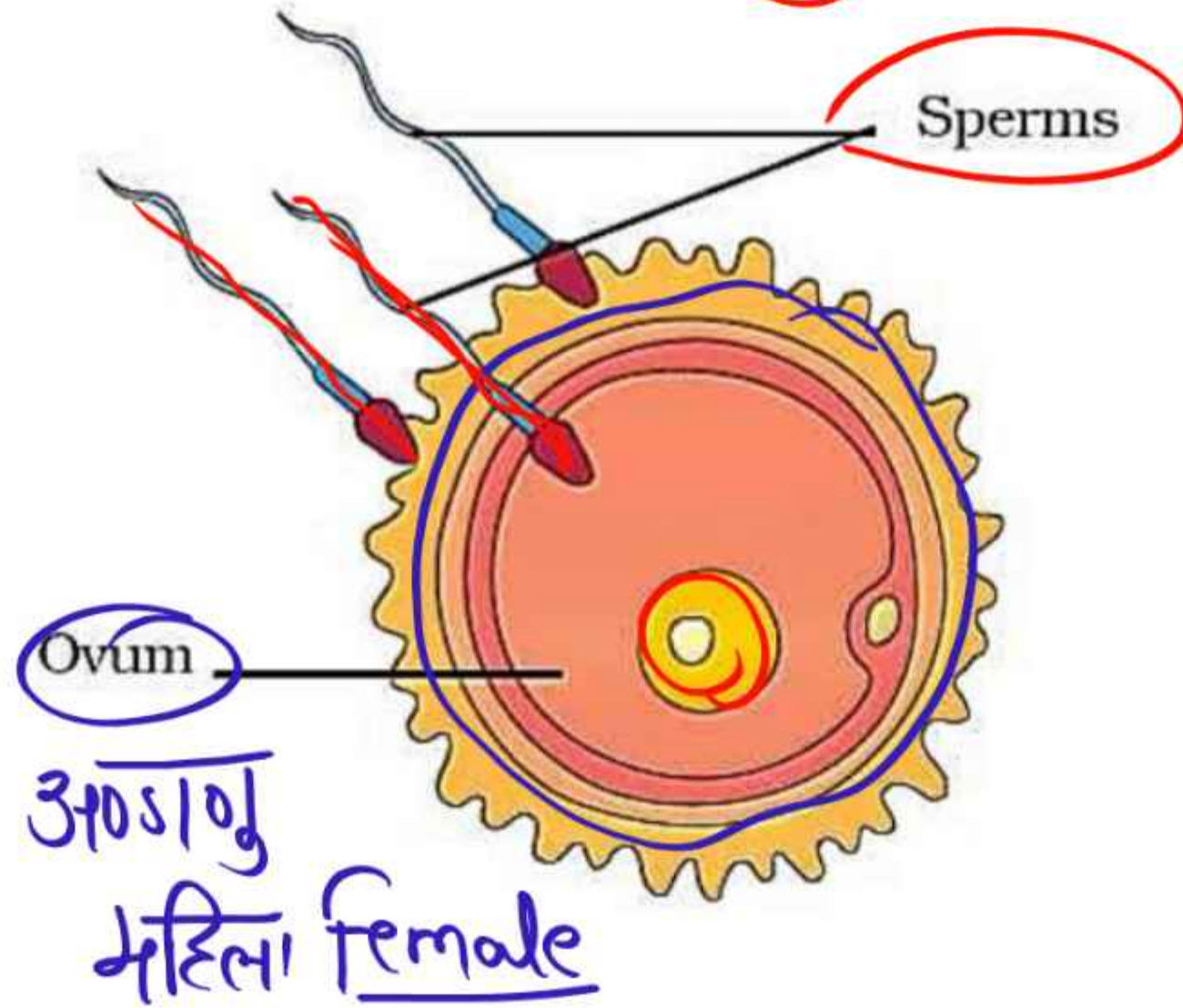
Sperms

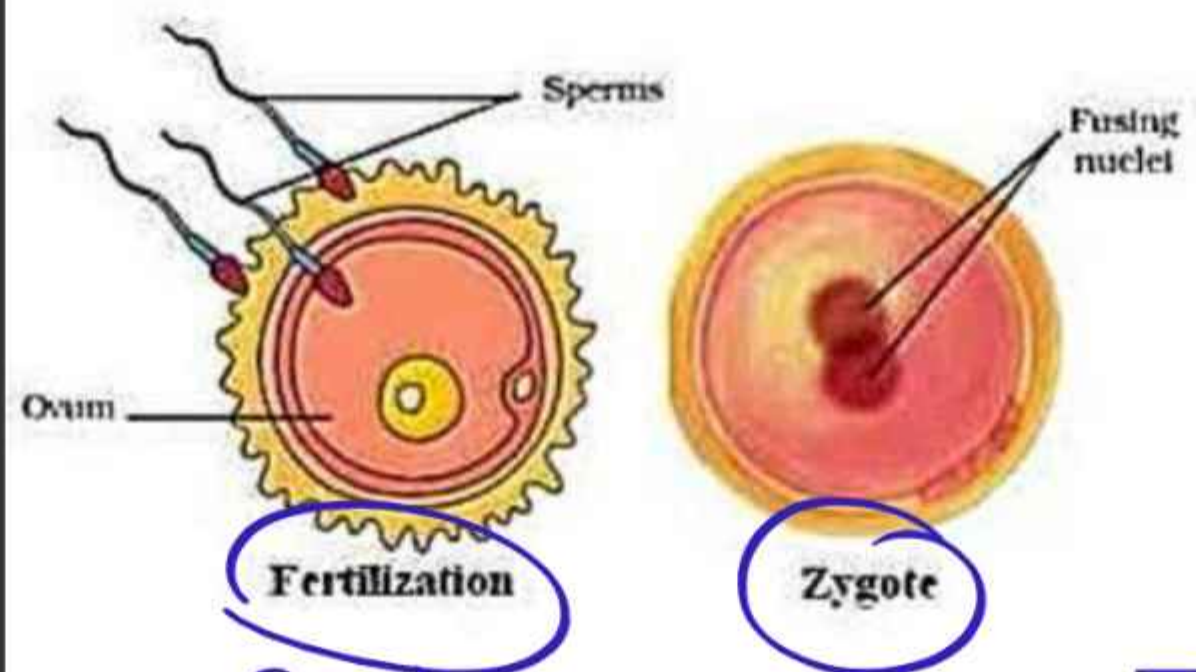
Ovum

असिचोपित नालिका
Fillman tube

Ovary

પુરુષ Male
સ્ત્રી Female





fertilization

zygote ଗଠନ

ବୀଜ ଶିଳ୍ପ
Child

types of Asexual Reproduction

अलैंगिक जनन के प्रकार (विधि)

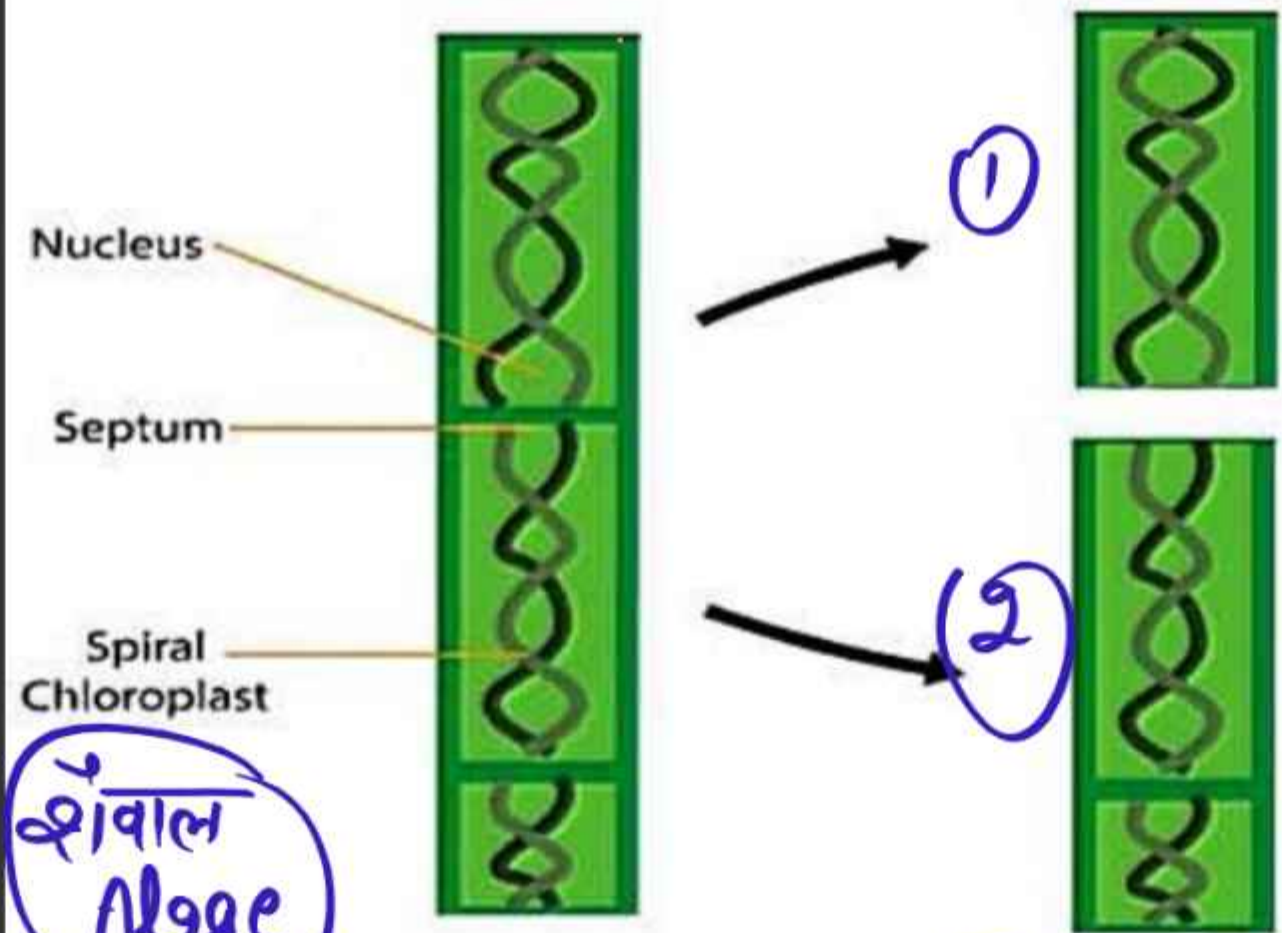
Imp

① Fragmentation खण्डन 

~~Imp~~ ② Budding मुकुलन ⇒ कलिया नुमा संरचना बनती है।
Bud like structure.

③ Fission विखण्डन

④ Vegetative propagation अनस्पतिक प्रसार



शैवाल
Algae

Spirogyra स्पाइरोगिरा

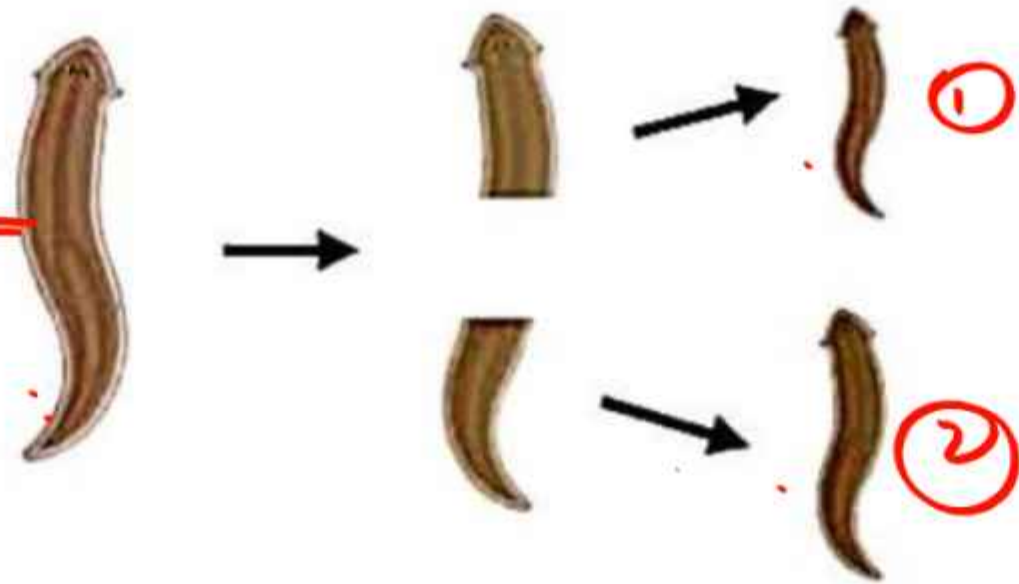
Fragmentation in spirogyra

अलैंगिक जनन
Asexual
Reproduction
॥
Fragmentation
खंडन

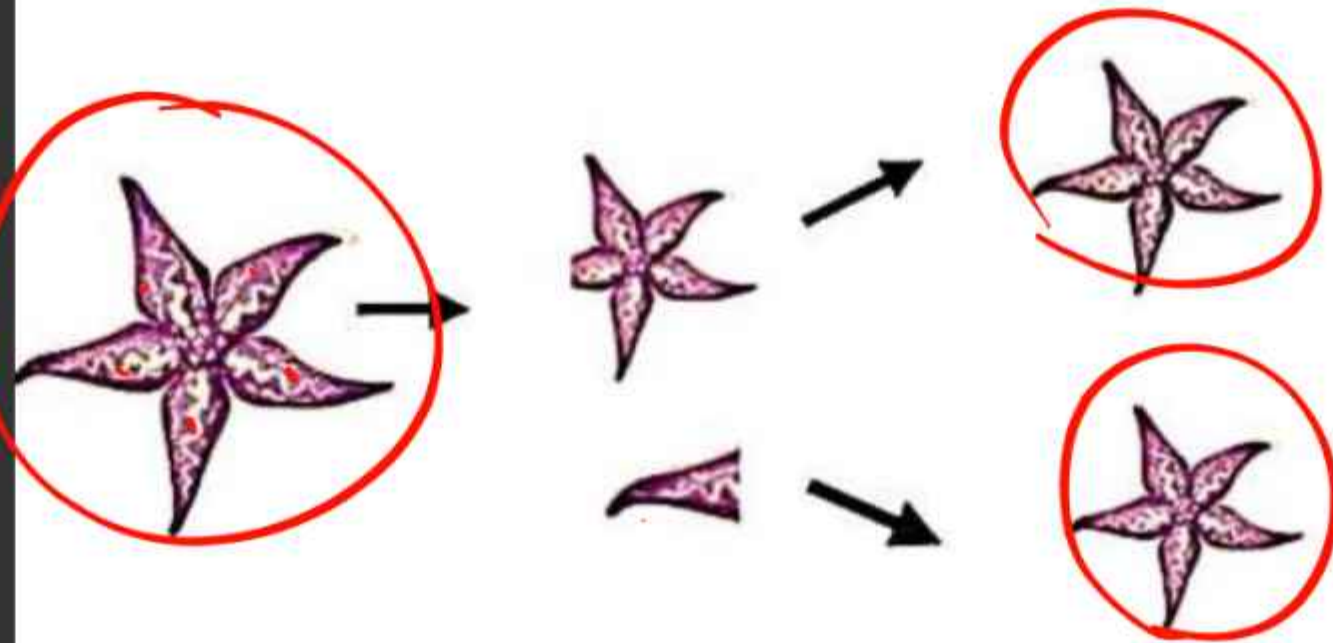
Planaria
प्लनरिया
जंतु
Animal

Starfish
तारा मीन

Fragmentation in Planaria

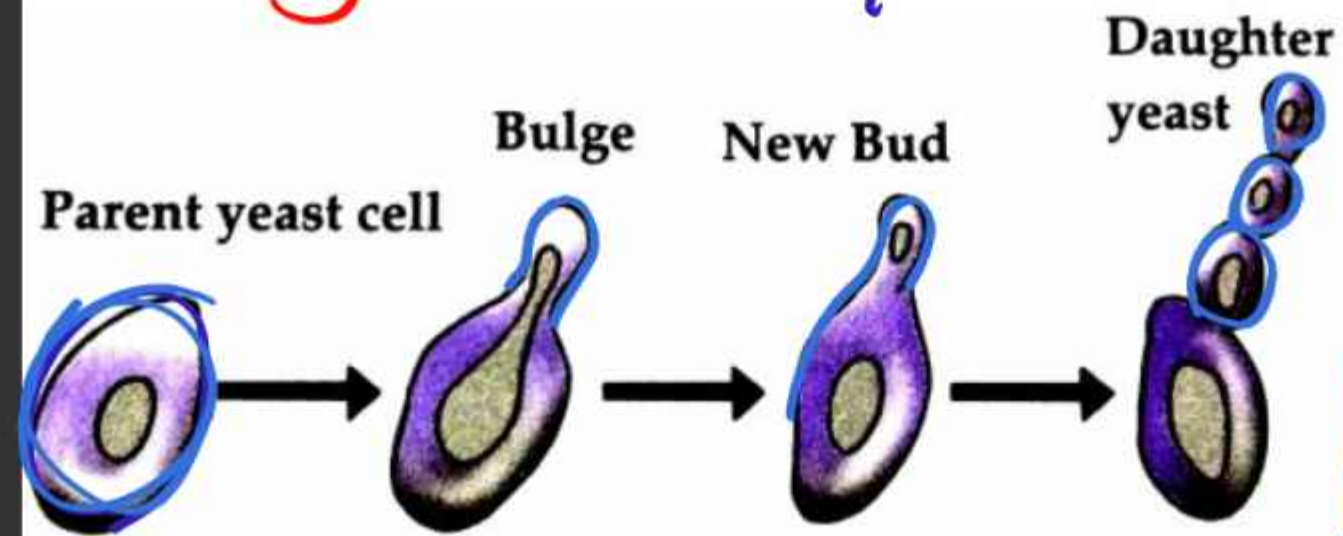


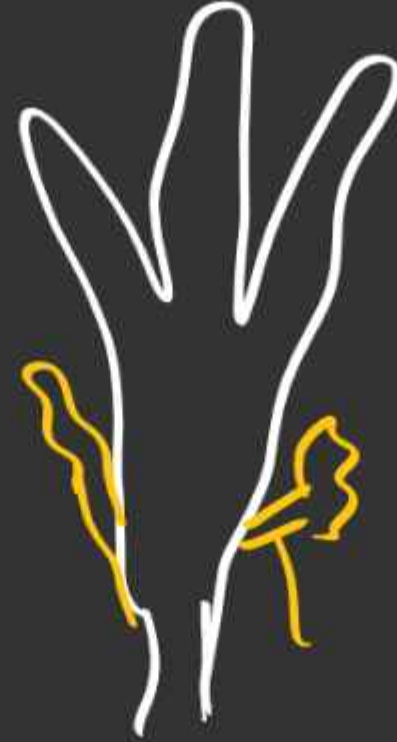
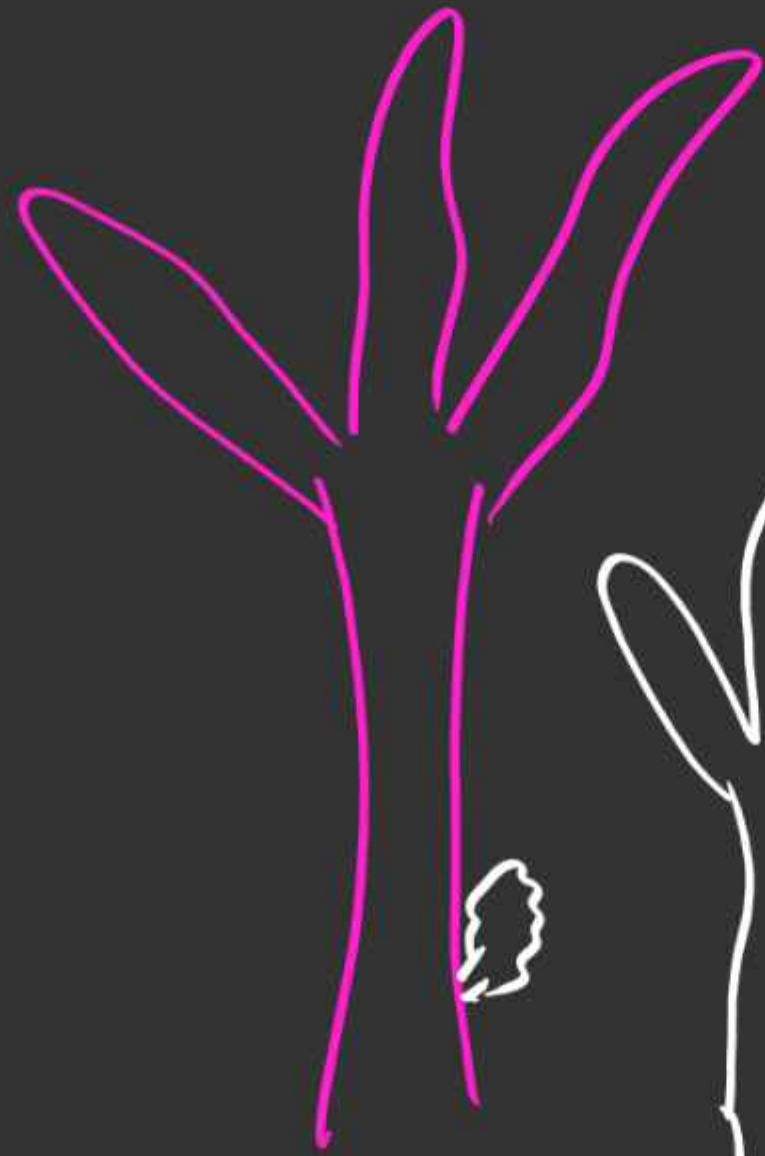
Fragmentation in starfish



अलैंगिक जनन
Asexual Repro

Budding
मुकुलन $\Rightarrow$ ① पीस्ट (खमीर)
yeast





হিস্ট্রি
Hydra.

অলৌকিক জনন →
Asexual Repro.

মুকুলন Budding

fission

विराजन

- ① अमीबा Amoeba
- ② पैरामिशियम paramecium
- ③ जीवाणु bacteria

Binary
fission

द्विविराजन

दो भागों में बटना
divided into two part

Multiple fission

बहुविराजन

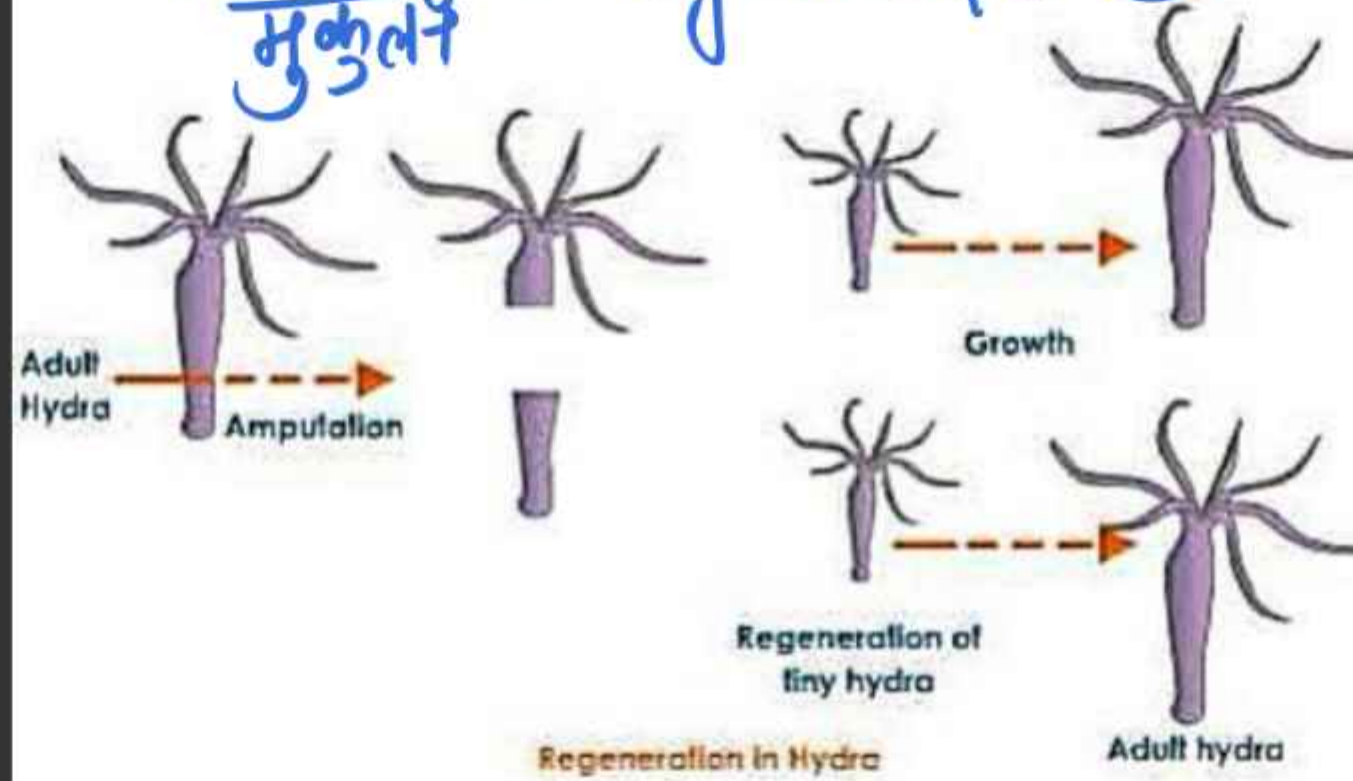
बहुत सारे भागों में बटना
divided into many part



प्लाज्मोडियम
plasmodium

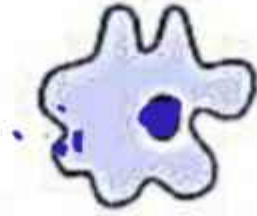
- ④ यूग्लेना Euglena

Budding → Hydra हाइड्रा (जंतु)
मुकुलन



BINARY FISSION IN AMOEBA

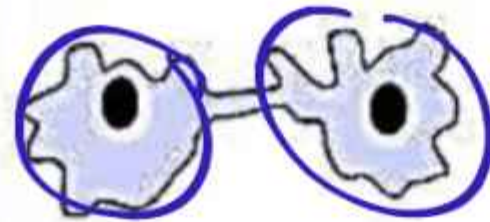
द्विविखणन



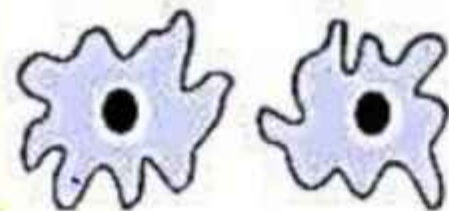
Parent Cell



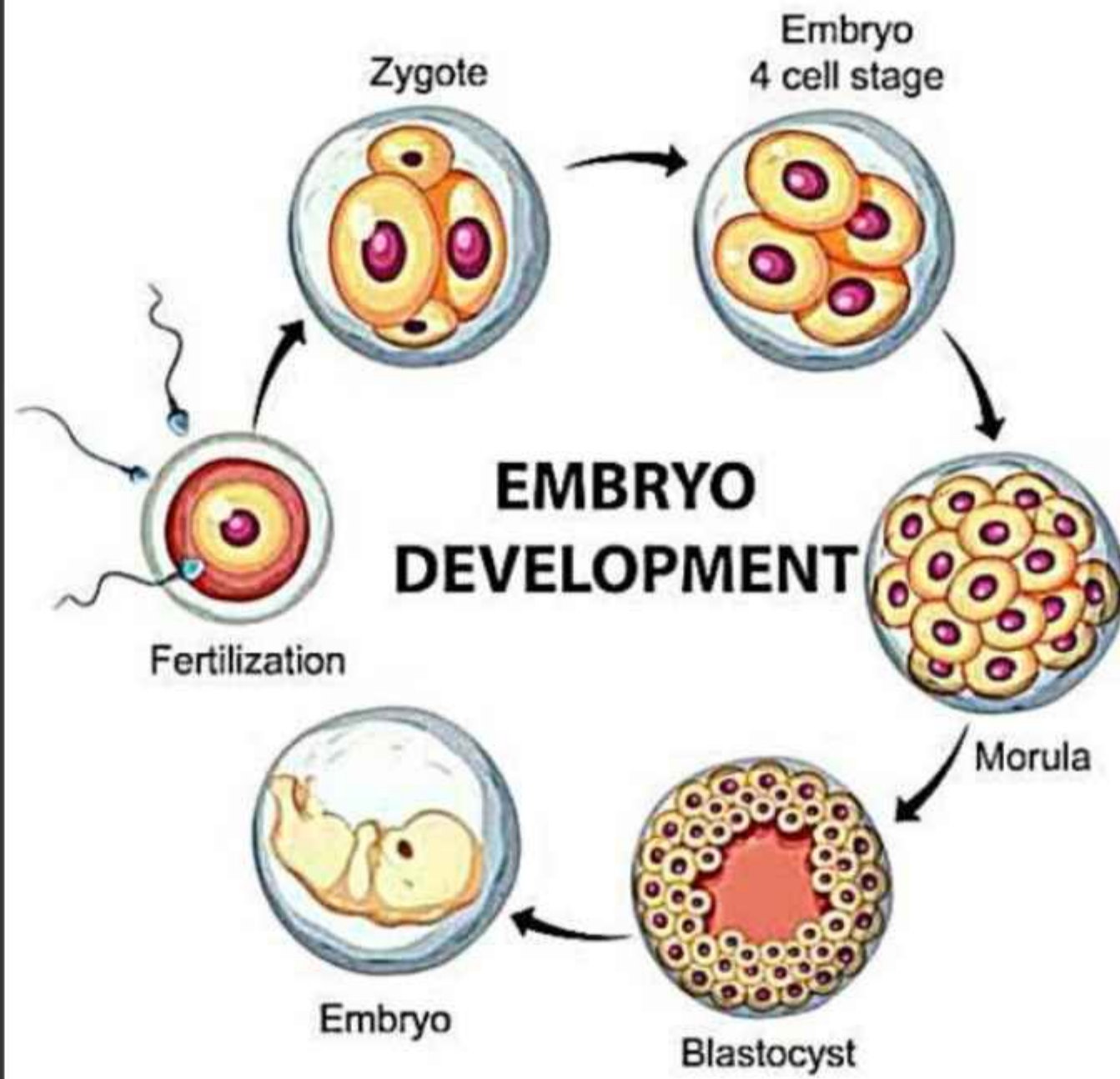
Nucleus Divides

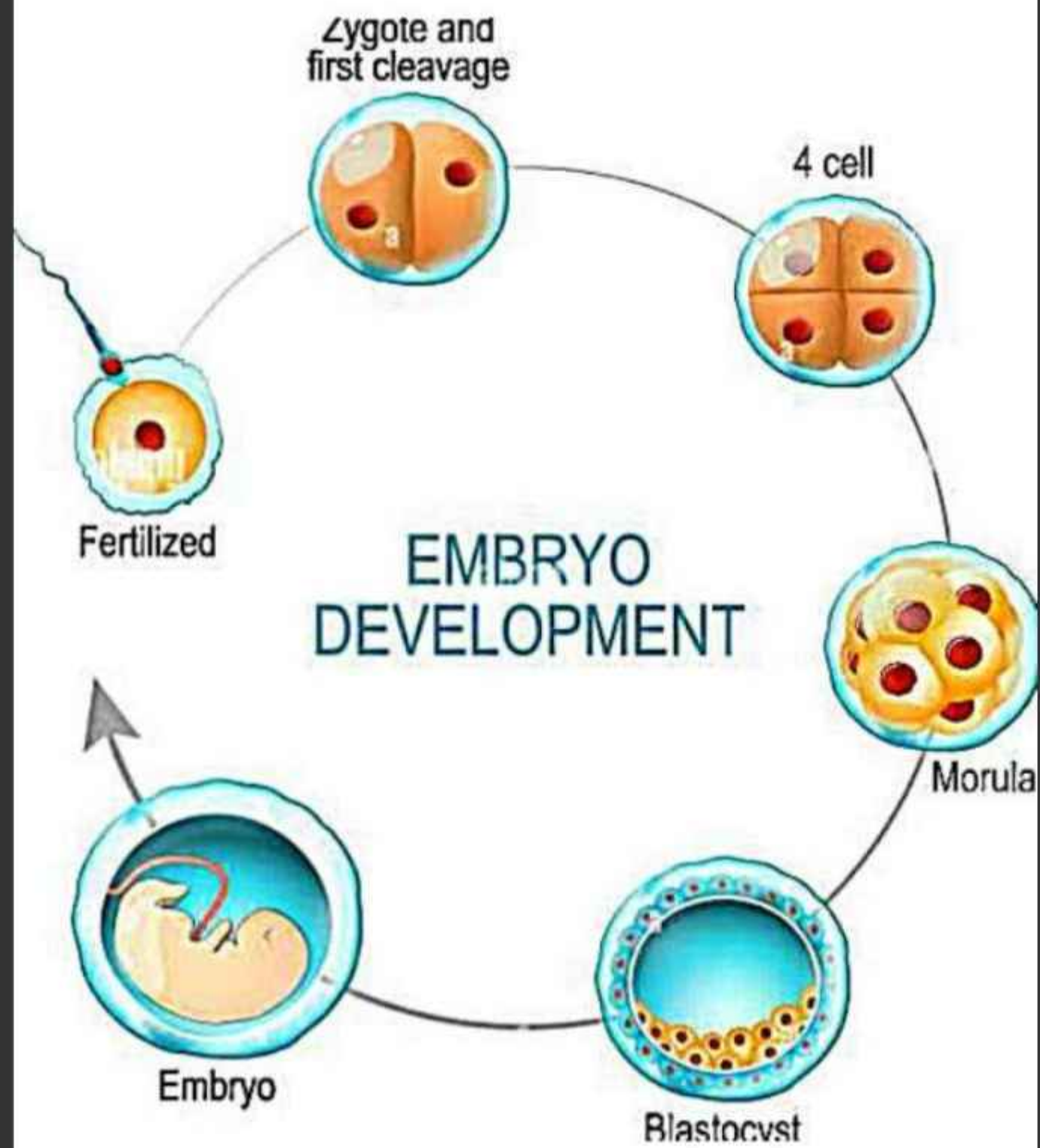


Cytoplasm Divides



Two Daughter Cells







Fertilized
egg



2-cell
stage



4-cell
stage



8-cell
stage



16-cell
stage



Blastocyst



Foetus
4-weeks



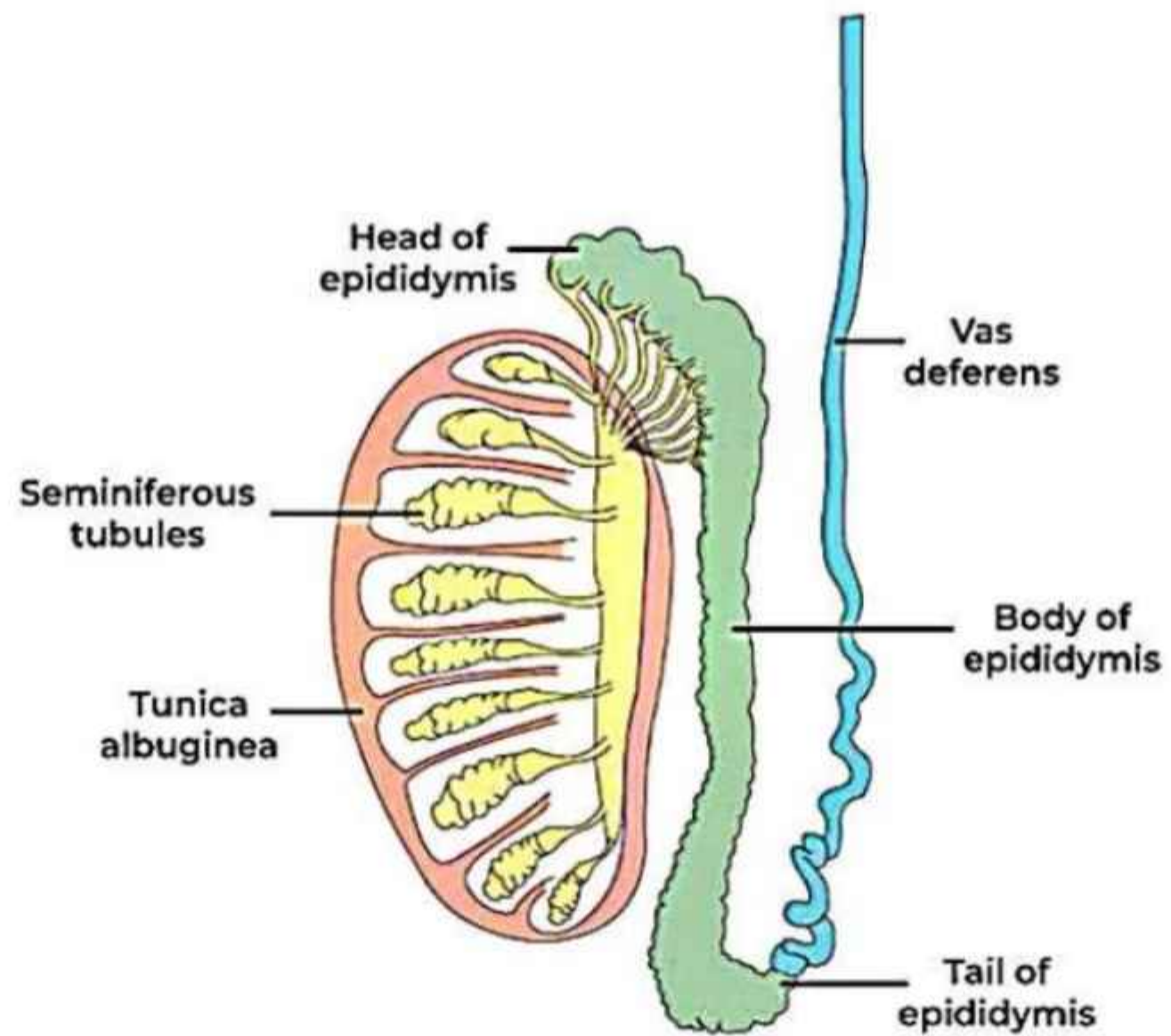
Foetus
10-weeks

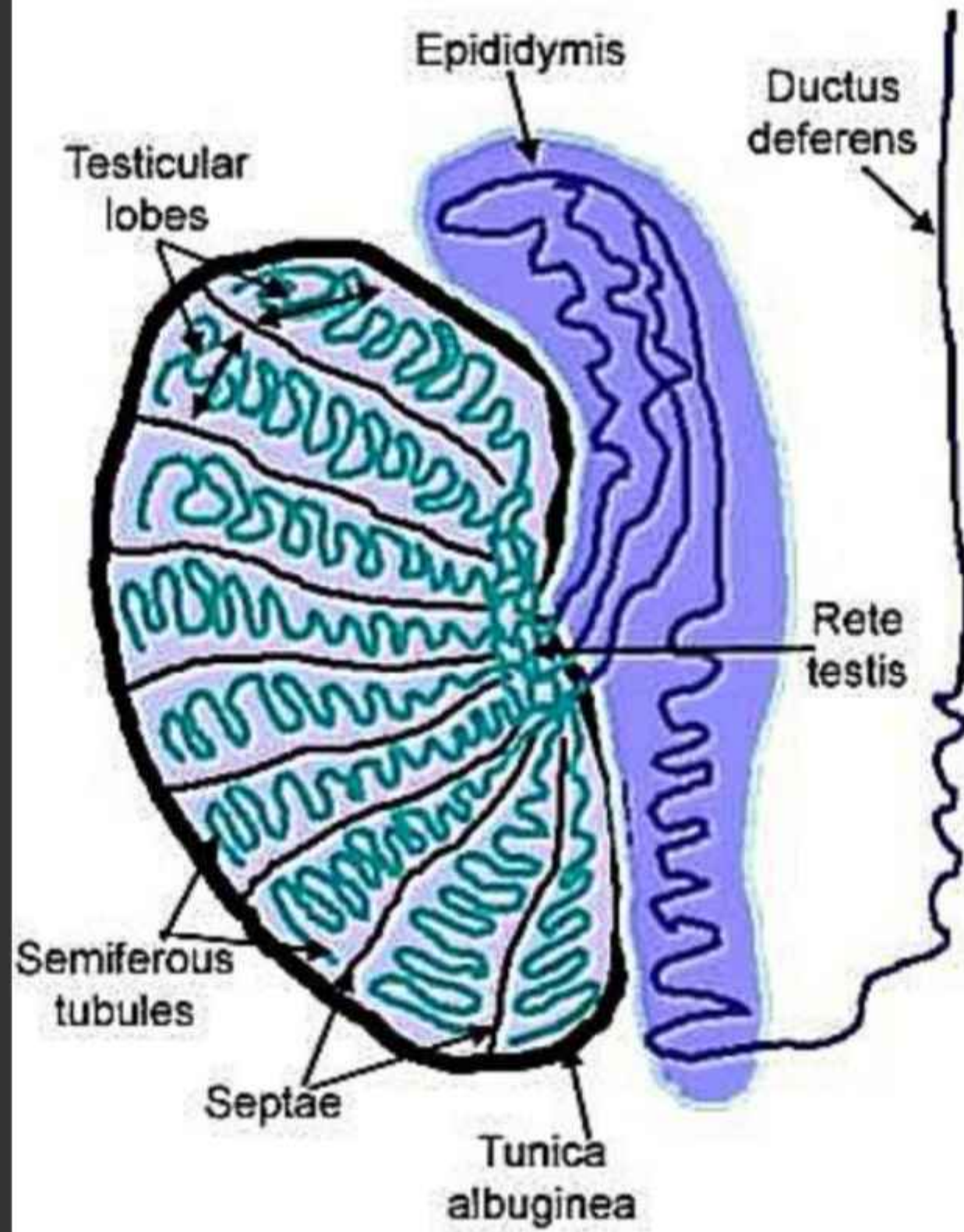


Foetus
16-weeks

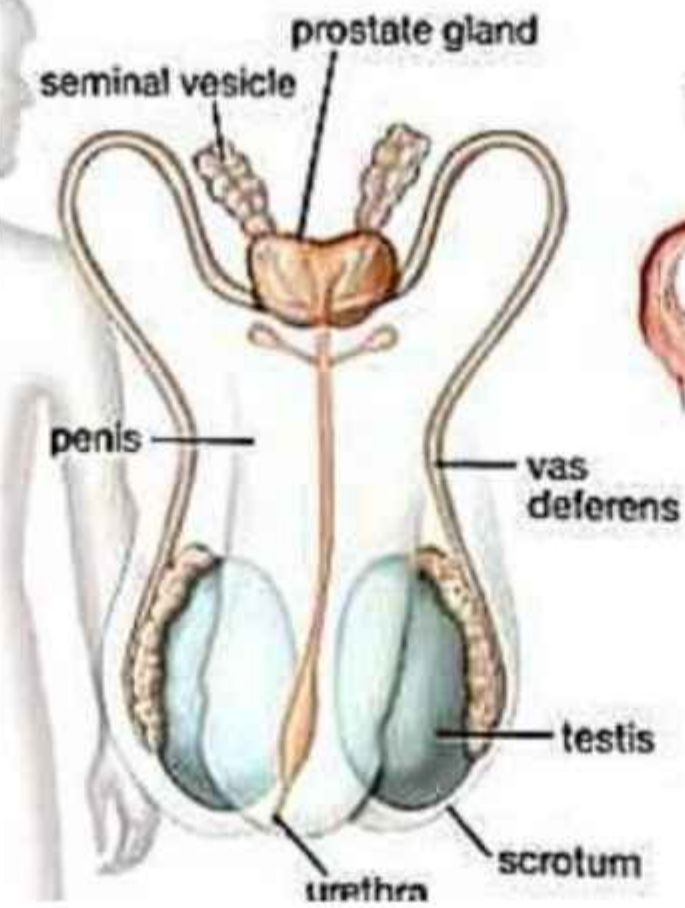


Foetus
20-weeks





Male Reproductive System



Female Reproductive System

