

# YAKEEN NEET 2.0

**2026**

**Biological Classification**

**Botany**

**Lecture - 05**

**Rupesh Chaudhary Sir**





## Topics to be covered

1

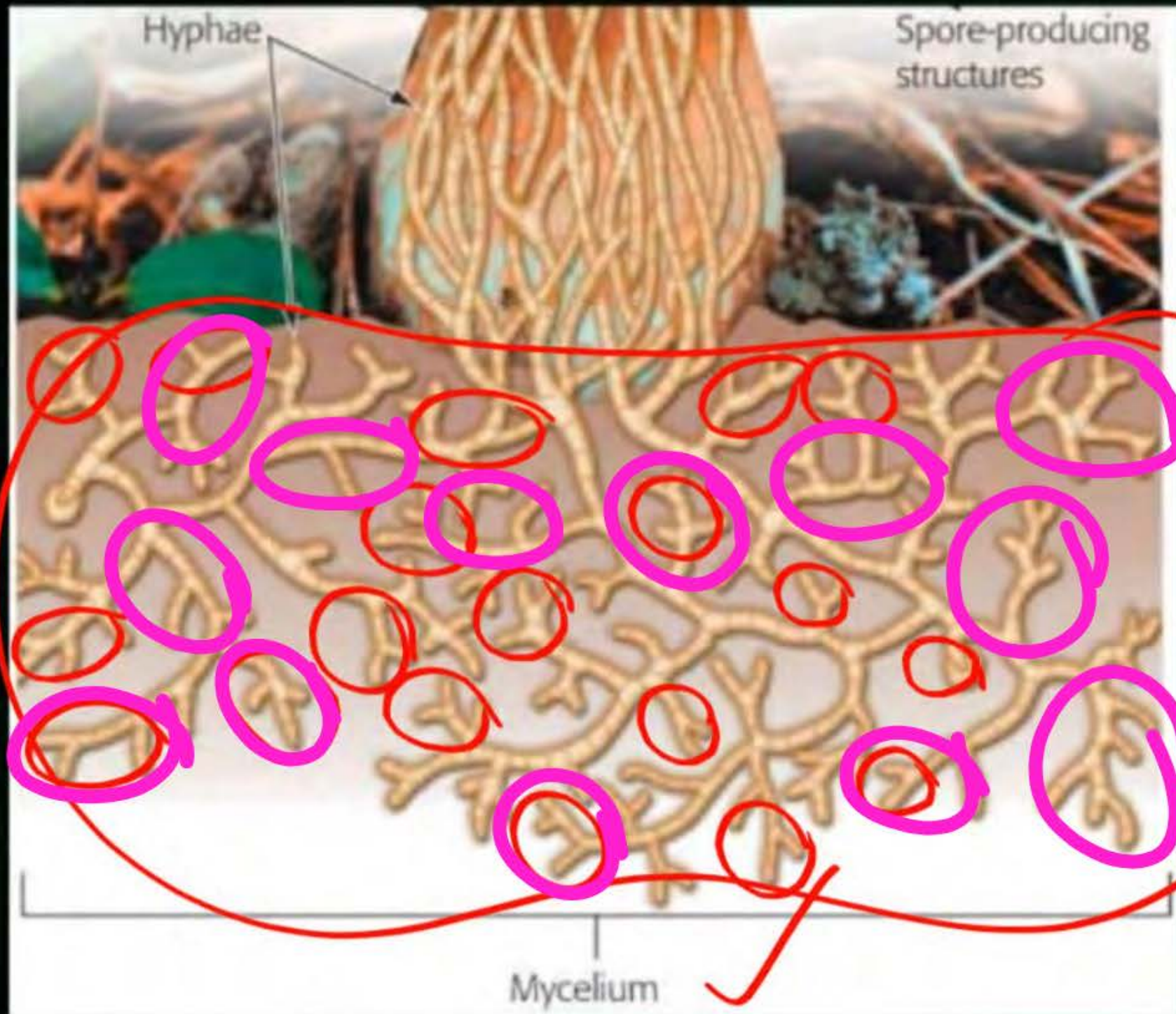
FUNGI

2

3

4



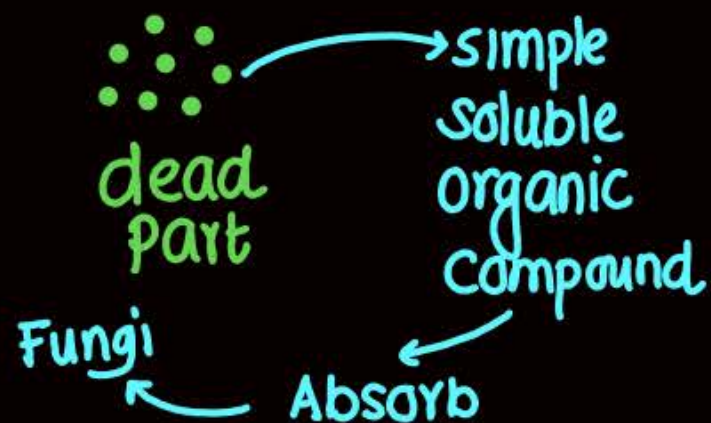




## Character

### ★ Heterotroph

→ Saprophytic



→ Symbiotic

eg: LICHEN  
Mycorrhiza  
(Fungus + Root of Higher plant)

→ parasitic

eg: Albugo: Whitespot (Mustard)  
Puccinia: Rust (wheat)  
Ustilago: Smut

## Fungi

- ★ CELL WALL: Chitin & Polysaccharide
- ★ Mostly: Multicellular, Filamentous  
BUT yeast: Unicellular, (Beer, Bread)
- ★ Antibiotic: Penicillin (Penicillium)
- ★ Mushroom: Edible (Agaricus)  
& Non edible/poisonous: Toad stool.
- ★ PREFER: Warm, humid place. (Air, H<sub>2</sub>O, soil, plant, animal, Bread, Rotten fruits (Cosmopolitan: Found everywhere (diversity in Habitat))
- ★ Long, slender (thin), Thread: Hyphae  
TO FORM Mycelium ← CRISS CROSS

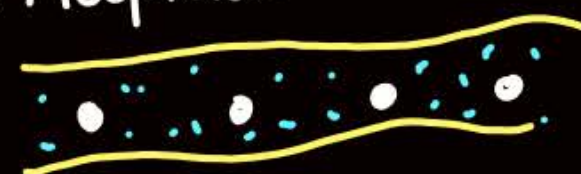
## Types of mycelium

① SEPTATE



(Diversity)

② Aseptate



SEPTA ABSENT  
Multinucleated protoplasm  
(Coenocytic)

## Classification of fungi

CRITERIA: ① Fruiting Body  
② spore formation  
③ Morphology of mycelium

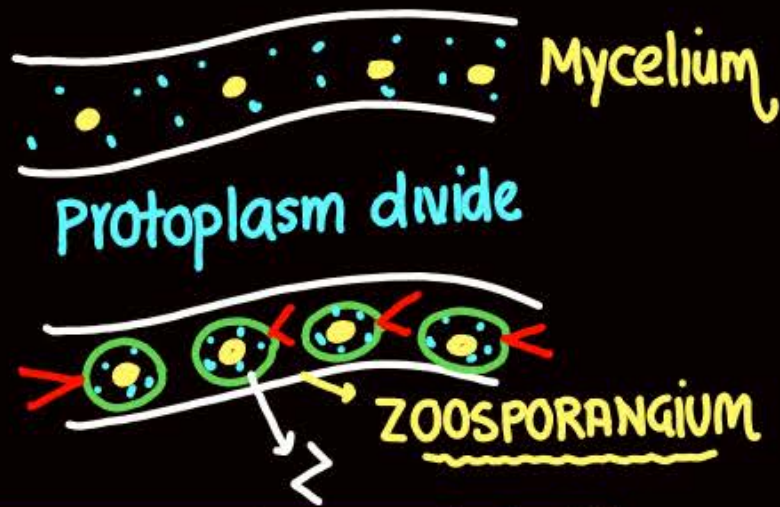


# Algal fungi ← Phycomyces

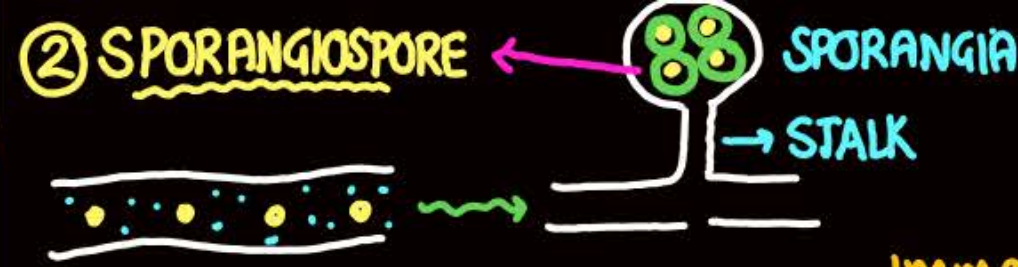
★ Aquatic, dead decaying, moist damp place, parasitic (obligate): Albugo (Mustard).

★ Aseptate, coenocytic, multinucleated  
Asexual

## ① ZOOSPORE (Z)



- ★ Motile/flagellated
- ★ Endogenous.



NON MOTILE / ENDOGENOUS  
(Aplanospore)

Immediately Followed (DIKARYOPHASE: ABSENT)

SEXUAL : ③ STEPS PLASMOGAMY → By → KARYOGAMY → MEIOSIS

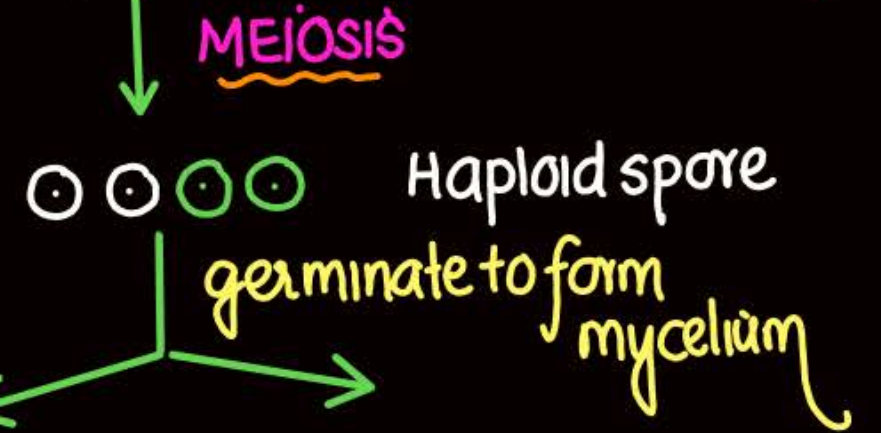


★ Mixing of protoplasm  
(But nucleus not fused)  
PLASMOGAMY.

Fusion of  
Two  
nucleus



NOTE: If zygote covered by thick wall: zygospore (2n)



NOTE: Fusing gamete (n) morphologically similar (Isogamous) or dissimilar (Anisogamous/Oogamous).  
eg Rhizopus (Bread mould)  
Albugo  
Mucor



# ASCOMYCETES → Sac Fungi ?

- ★ parasitic, saprophytic, decomposer, coprophilous (grow on dung)
- ★ Mycelium: Branched, septate.
- ★ Mostly Multicellular.
- ★ Yeast (Sacchromyces): mycelium absent.

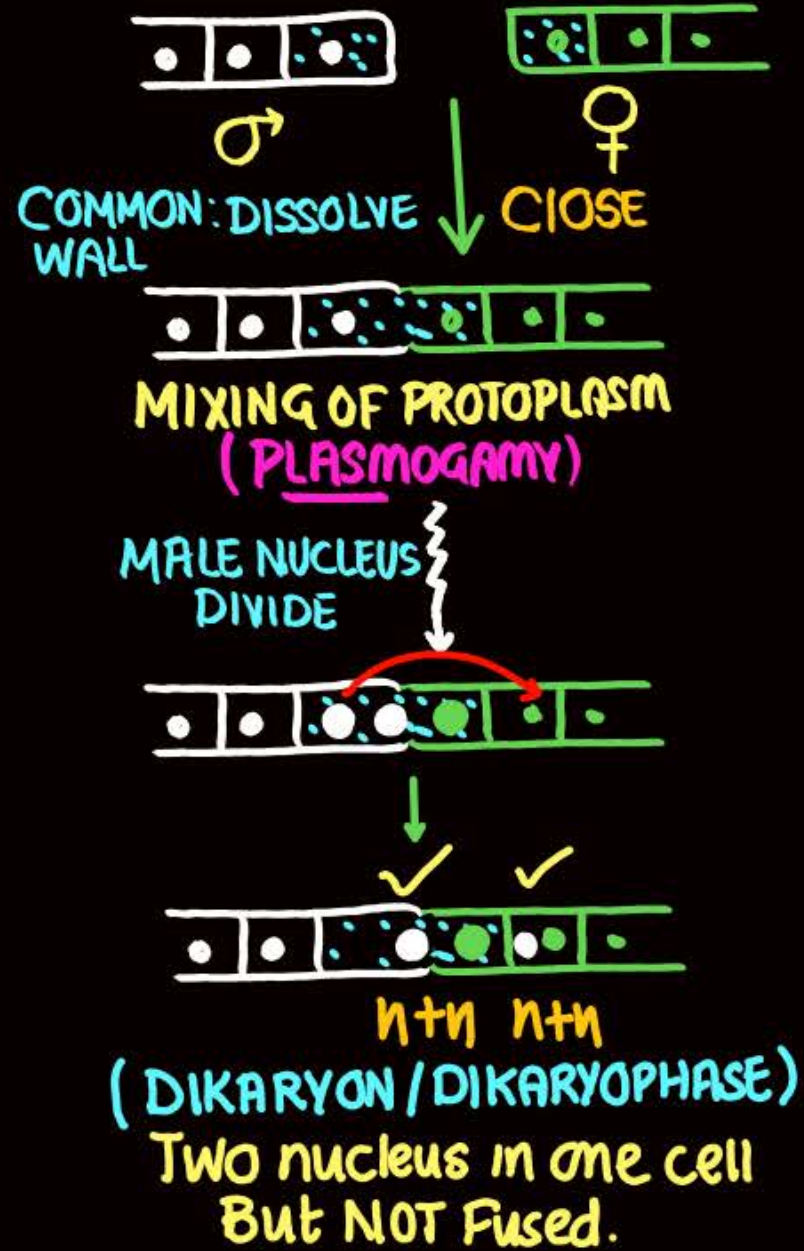
SEXUAL REPN.

PLASMOGAMY

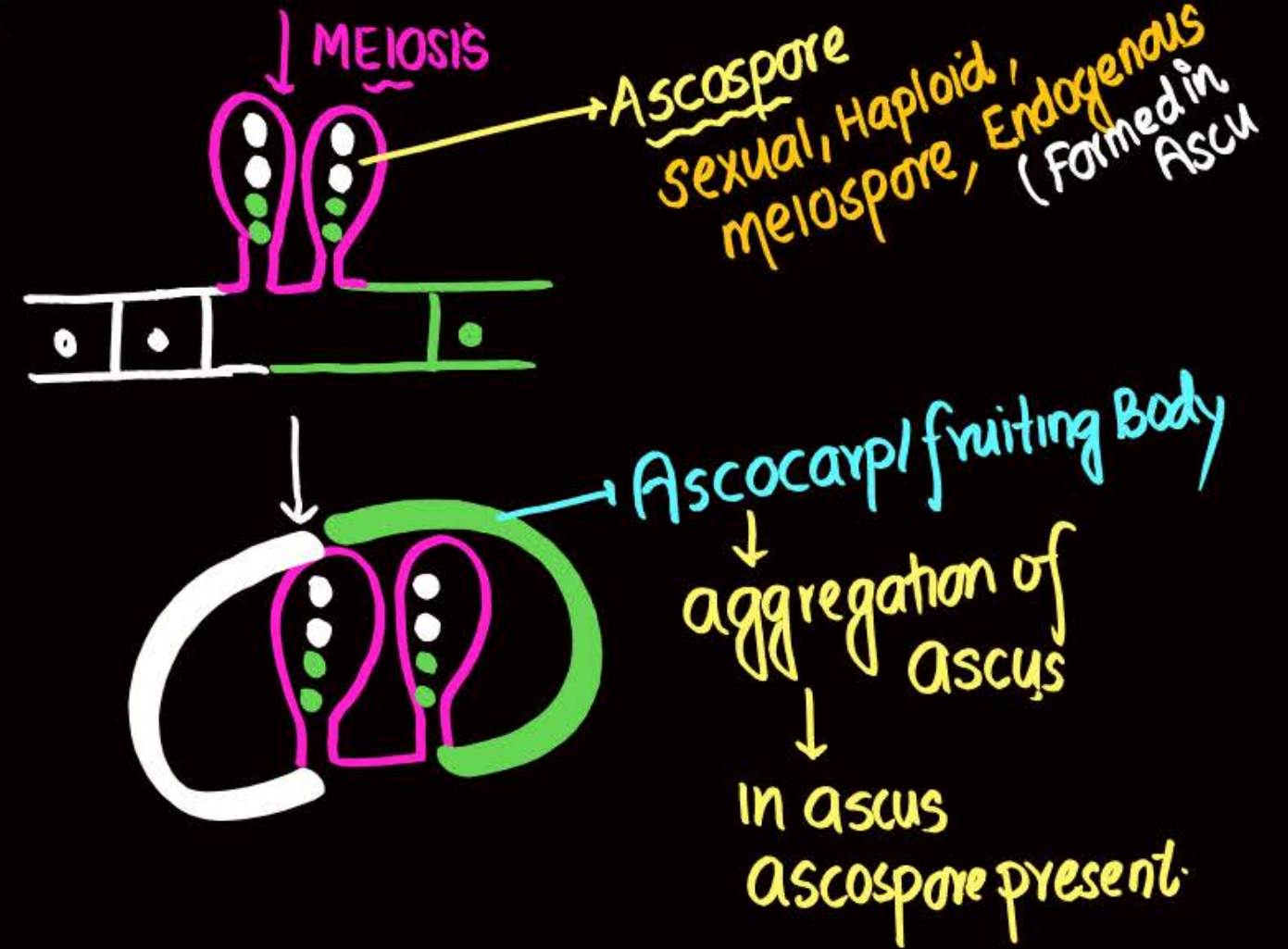
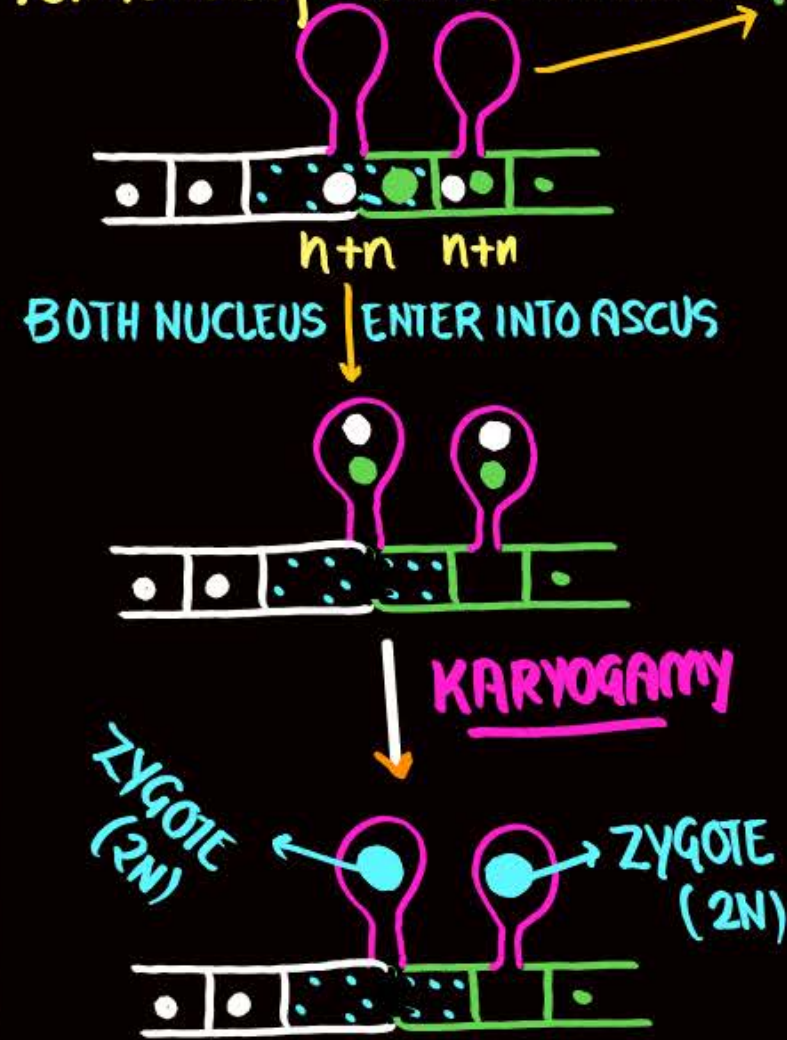
DIKARYOPHASE

KARYOGAMY

MEIOSIS



## Formation of sac like structure (Ascus)





## Asexual Rep<sup>n</sup>

### CONIDIA



- \* non-motile
- \* Thin walled
- \* Exogenous
- \* Chain: present.

### Example

- ① Morels & Truffles : Edible
- ② Penicillium
- ③ claviceps
- ④ Aspergillus
- ⑤ yeast
- ⑥ Neurospora  
(Biochemical & genetics work).



# Homework from **YAKEEN NEET 2.0 2026** Module



Module  
    ↳ (India's  
        Best module)   ⇒ Phycomycetes  
                            Ascomycetes  
                            Question





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