YAKEEN NEET 2.0

2026

Biological Classification

Botany | Lecture - 06

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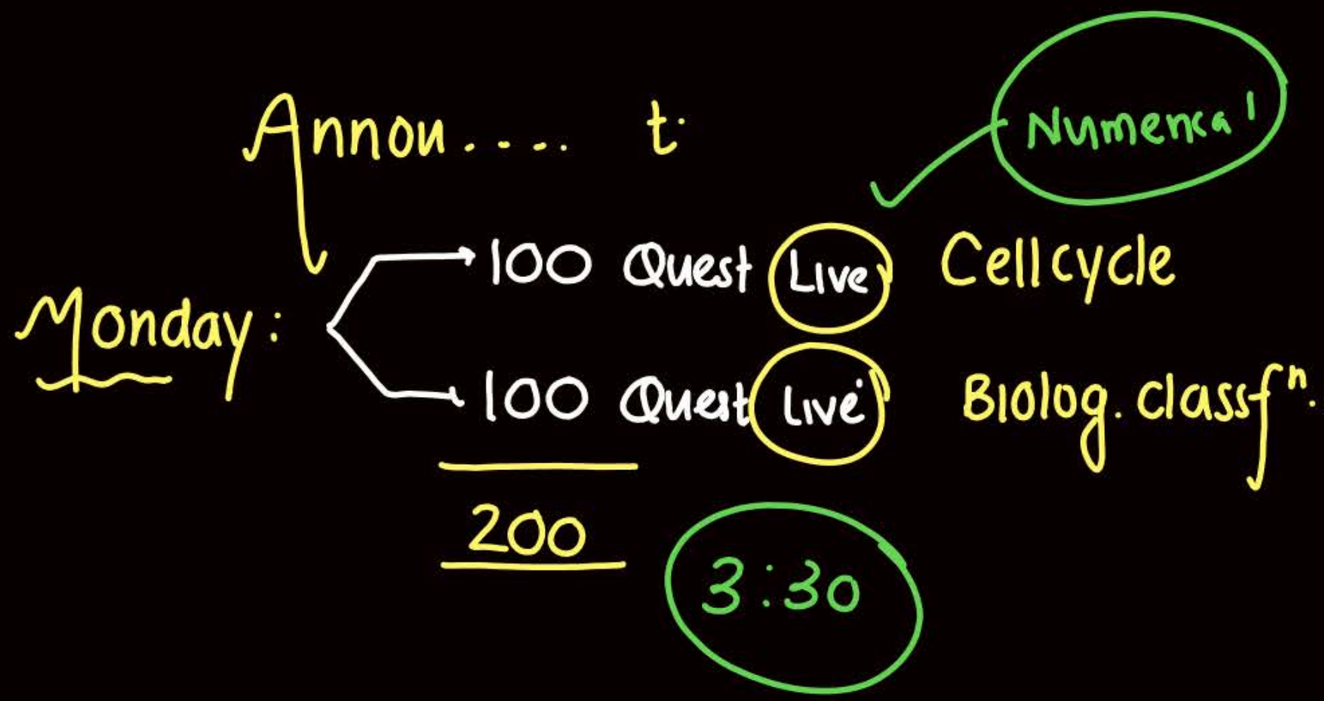
Topics to be covered

1. Fungi Part -02
2.
3.
4.


Annou.... t:
Numerical
Monday:
100 Quest Live Cell cycle
100 Quest Live Biolog. classfn.
200
3:30

Basidiomycetes / Club Fungi

* Branched, septate
* soil, logs of wood, Tree Stumps, parasitic
* Asexual spore: generally absent
* Vegetative Repn: fragmentation

eg: Mushroom
- Edible: Agaricus
- poisonous: Toadstool

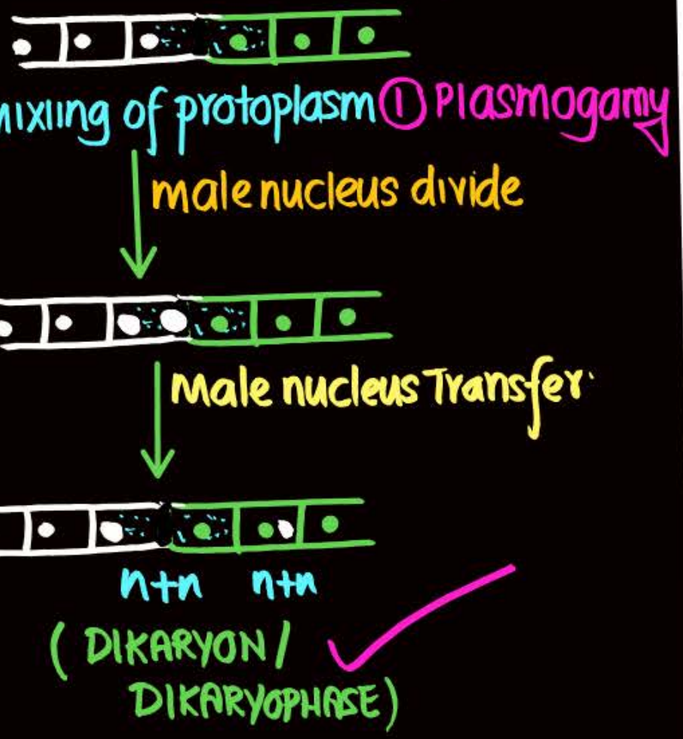
Puff Fungi

Bracket fungi

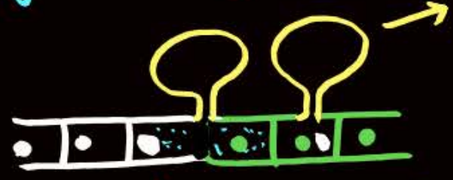
Rust Fungi: Puccinia

Smut fungi: Ustilago

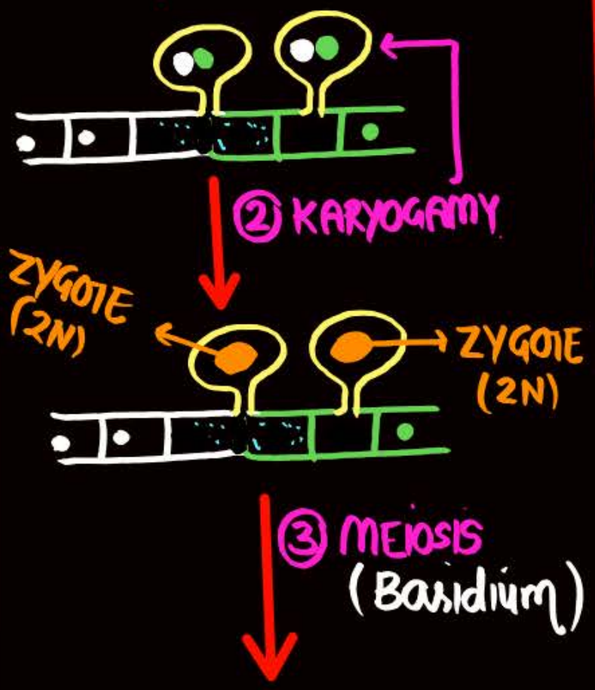
Sexual Repⁿ

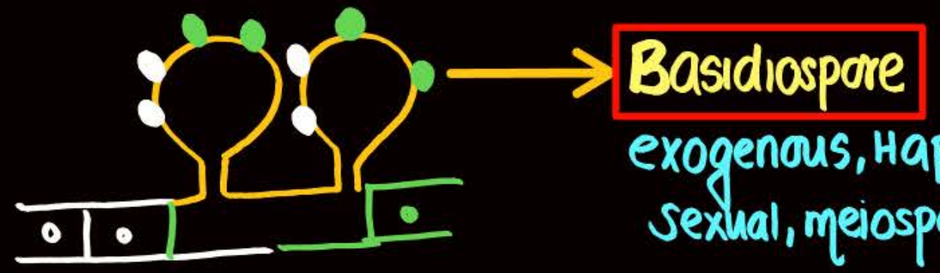


formation of Basidium (Club like)



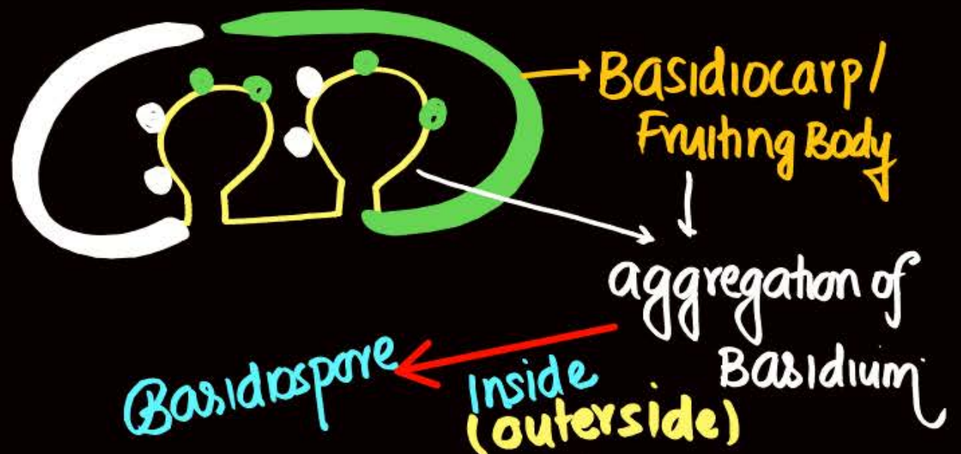
Both Nucleus transfer into Basidium





Basidiospore

exogenous, Haploid, Sexual, meiospore



NOTE : Plasmogamy not immediately followed By Karyogamy.

NOTE : Sex-organ absent ?

Wait

Deutromycetes

* Imperfect fungi (perfect stage/Sexual Repⁿ → absent.
* If sexual Repⁿ discovered, then those fungi → shift → Ascomycetes/Basidiomycetes.
* Vegetative/Asexual → given ONE NAME
  - CONIDIA
* Branched, septate mycelium
* saprophytic /parasitic.
* mostly decomposer of litter (fresh undecomposed matter)
  - Recycling of Nutrient.

eg: Alternaria

Trichoderma

Colletotrichum.

	Phycomycetes	Ascomycetes	Basidiomycetes	Deuteromycetes
Common name	Algal fungi	Sac fungi	Club fungi	Imperfect fungi
Mycelium	Aseptate, Multinucleated Coenocytic	Branched, septate	Branched, septate	Branched, septate
Habitat	aquatic, dead decaying, moist/damp place & Obligate parasite (Albugo in Mustard)	Saprophytic, parasitic, decomposer, coprophilous (dung).	soil, logs of wood, Tree Stumps ; parasitic, saprophytic	Some: saprophytic / parasitic & mostly decomposer of litter, Helps in Recycling of Nutrients.
DIKARYOPHASE	✗ P → K → M	P → D → K → M	P → D → K → M	Sexual Repn absent
Sexual fruiting Body	✗	Ascocarp: aggregation of ascus	Basidiocarp: aggregation of Basidium	✗
Asexual Repn	Zoospore: motile, endogenous Aplanospore: Non motile, endogenous.	Conidia: Non motile, Thin wall, exogenous, formed in chain	generally absent Vegetative Repn By fragmentn.	vegetative / Asexual given one name (Conidia)

	Ⓟ	Ⓐ	Ⓑ	Ⓓ
Sexual spore:	Zygote ($2n$) / oospore ($2n$) / zygospore ($2n$) → Isogamous → Anisogamous / oogamous	Ascospore: (n), Endogenous Sexual, meiospore.	Basidiospore: n, Exogenous, Sexual, meiospore.	Absent: If discovered then fungi shifted to Ascomy / Basidiomy.
Site of Karyogamy & meiosis	Zygote	Zygote (Ascus)	Zygote (Basidium)	X
Sex-organ.	✓	✓ mostly multicellular But	X	X
Example:	Albugo, Mucor, Rhizopus (Bread mould)	Yeast (Unicellular), mycelium absent Bread, Beer Aspergillus, Claviceps. Neurospora (Biochemical genetics work / Drosophila of Plant Kingdom) Penicillium: Penicillin Morels & Truffles: edible fungi	Rust (Puccinia) Smut (Ustilago) } Parasitic Bracket Puff Mushroom → Agaricus (edible) → Toadstool (Non edible)	Trichoderma Alternaria Colletotrichum.

Question

Which of the following is not true about members of Phycomycetes?

(a) They can be seen in aquatic habitats, decaying wood or as obligate parasites on plants.

(b) Asexual reproduction takes place by zoospores or by aplanospores.

(c) Spores are exogenously produced in sporangium.

(d) Mycelium is septate and coenocytic.

(e) Zoospores are motile while aplanospores are non motile

1. d and c
2. Only d
3. Only c
4. a

Question

Which of the following is not true about Ascomycetes?

(a) They are called as sac- fungi

(b) Mycelium is unbranched and septate

(c) Sexual spores are conidia produced exogenously on conidiophores

(d) Sexual spores are advisories produced endogenously on asci.

(e) They are saprophytic, Decomposers, parasitic or coprophilous.

ascospores

1. b and c
2. b and d
3. Only c
4. b, e and d

Question

Choose the incorrect statement

1. Albugo is a parasitic fungus on mustard.
2. Saccharomyces belongs to class Phycomycetes and is multicellular
3. Neurospora is used extensively in biochemical and genetic work
4. Morels and buffels are edible.

Question

Which of the following is not true about Basidiomycetes?

1. Mycelium is branched and septate C
2. Asexual spores are not found. C
3. Vegetative reproduction by fragmentation is common. C
4. Sex organs are ~~present~~ absent.

Question

Which of the following is not true about Puffballs?

(a) It belong to class Basidiomycetes

(b) Karyogamy and meiosis take place in basidium producing 4 basidiospores.

(c) The basidiospores are produced endogenously in basidium.

(d) Basidia are arranged in fruiting Body called basidiocarp

(e) Plasmogamy is brought about by fusion of two somatic cells of different strain.

1. c and e
2. Only e
3. Only c
4. b, c and e

Question

Assertion: Deuteromycetes are also known as imperfect fungi.

Reason: Only asexual and vegetative phases of this fungus are known.

(sexual stage absent)

1. If both Assertion and Reason are true and Reason is the correct explanation of Assertion.
2. If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
3. If Assertion is true but Reason is false.
4. If both Assertion and Reason are false.

Question

Which of the following is not true about Deuteromycetes?

(a) They reproduce only by asexual spores called conidia
(b) Mycelium is septate and branched
(c) Few members are saprophytic and parasitic.
(d) Most of the members are Decomposers of litter and help in mineral cycling.
(e) Once sexual stages of members were discovered, they are often moved to ascomycetes or Basidiomycetes

1. Only e
2. e, c and d
3. e and c
4. All are correct

Question

Match the following

A	Ustilago	1	Bread Mold
B	Puccinia	2	Antibiotic
C	Agaricus	3	Rust
D	Penicillium	4	Mushroom
E	Rhizopus	5	Smut

1. A- 2, B-1, C-3, D-4, E-5
2. A-5, B-3, C-4, D-2, E-1
3. A-4, B-3, C-2, D-1, E-5
4. A-5, B-1, C-4, D-2, E-3

Question

Which of the following is not true about fungi?

1. Fungi are cosmopolitan in nature. C.
2. White spots on mustard leaves are due to saprophytic fungus — Parasitic (albugo)
3. Their bodies consist of long, slender; thread–like structures called hyphae. C
4. The morphology of mycelium, mode of spore formation and fruiting body forms the basis of division of this kingdom into various classes. C.

Question

Assertion: Fungi can live as symbionts

Reason: Fungi form an association with algae as lichens and with roots of higher plants as mycorrhiza

1. If both Assertion and Reason are true and Reason is the correct explanation of Assertion.
2. If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
3. If Assertion is true but Reason is false.
4. If both Assertion and Reason are false.

Question

Which of the following is true about reproduction in fungi?

1. Vegetative reproduction takes place by fragmentation, fission and budding.
2. Asexual reproduction takes place by conidia or sporangiospore or zoospore.
3. Sexual reproduction takes place by oospores, ascospores and basidiospores.
4. All of the above

Question

Which of the following is not true about fungi

1. Fungi prefer to grow in a ~~cold~~ warm environment.
2. Most of the fungi are filamentous C
3. The cell wall of fungi is composed of chitin and polysaccharides. C
4. Most of the fungi are heterotrophs. C

all fungi are

Question

Match the following

A	Yeast	1	Deuteromycetes
B	Puccinia	2	Potato spindle tuber
C	Viroid	3	Bread and beer
D	Prions	4	Wheat rust
E	Colletotrichum	5	CJD

1. A-1, B-3, D-2, C-5, E-4
2. A- 1, B-3, C-2, D-4, E-5
3. A-3, B-4, C-2, D-5, E-1
4. A-2, B-1, C-4, D-3, E-5

Question

Given below is a list of fungi. State how many fungi belong to the below mentioned classes Ascomycetes (A), Phycomycetes (P), Deuteromycetes (D) and Basidiomycetes (B) Mucor, Penicillium, Mushrooms, Bracket fungi, Alternaria, Puffballs, Trichoderma, Claviceps, Neurospora, Aspergillus, Ustilago, Rhizopus, Puccinia, Albugo, Yeast,

P A B B D B D

A A A B P B P A.

1. P-3, A- 5, B-5, D-2
2. P-4, A-6, B-3, D-2
3. P-6, A-4, B-2, D-3
4. P-7, A-3, B-2, D-3

P - 3
A - 5
B - 5
D - 2

Question

Arrange the steps involved in the sexual cycle of fungi in the correct order.

(a) Fusion of two nuclei called Karyogamy.

(b) Fusion of protoplasm between two motile or nonmotile gametes is called plasmogamy.

(c) Meiosis in zygote resulting in haploid spores.

1. c, a, b
2. a, c, b
3. b, a, c
4. b, c, a

MONDAY : Summary, plants & animalia

= 4 घंटे

100 → cell cycle

100 → Bio. class1

200

(M) ⇒ Revn planner

THANK YOU