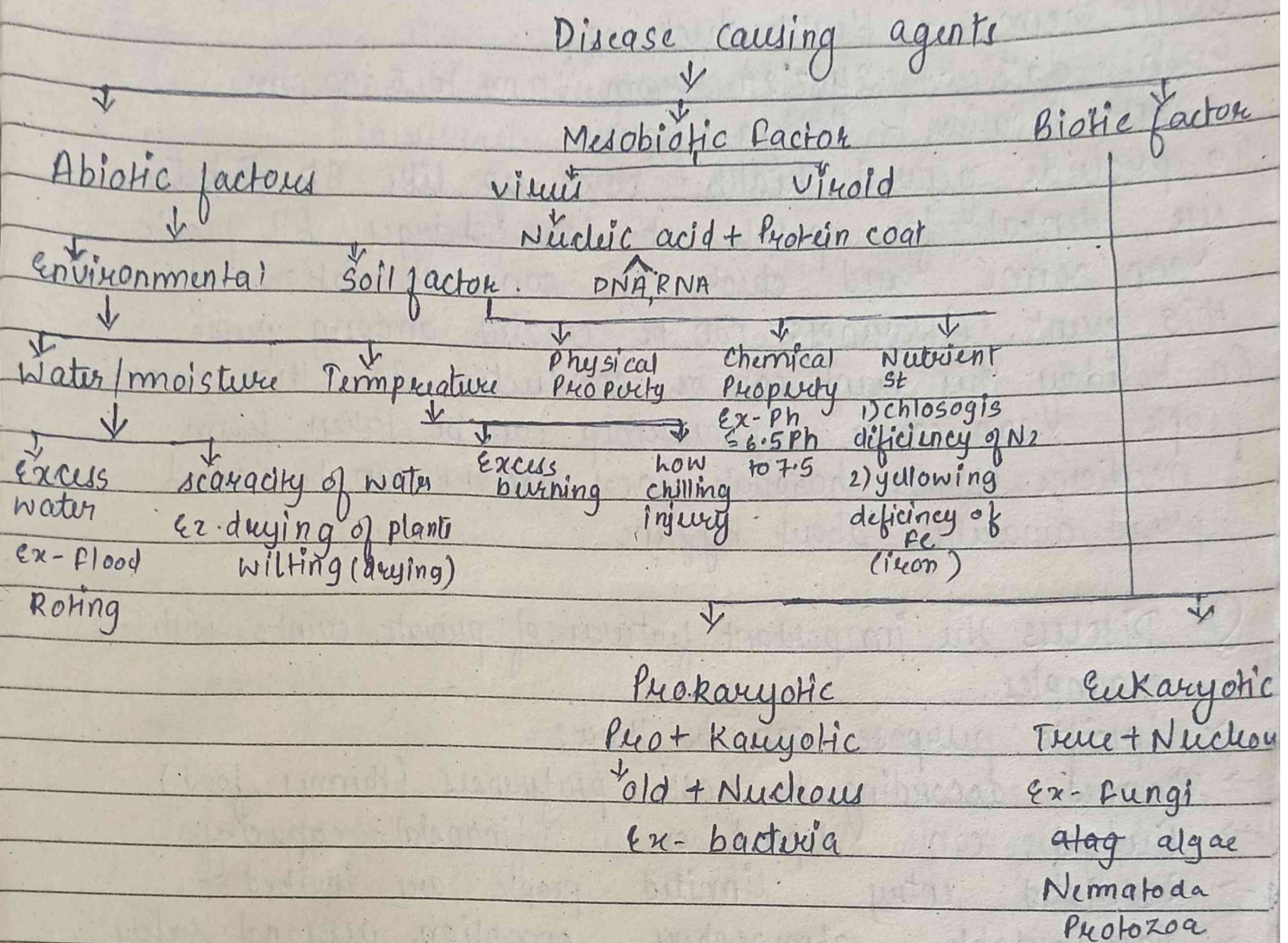




Soil physical property - texture

virus ex - Mosaic of soyabean, leaf curl of papaya, etc

viroid disease ex - Potato spindle tuber disease

→ Abnormality in plants caused by biotic, mesobiotic factor is called as disease

→ Abnormality caused by abiotic factors is called as a disorder.

12/9/25

Date: / / Page no: _____

Plant Pathology.

Disease - Any abnormal condition of living organism is known as disease condition.

Disease - When any organism is not performing to the best of genetic potential

Pathogen - Any agent which is responsible to cause disease in a plant. is called as pathogen
(रोग कारक)

Symptoms - Expression of disease condition is called symptoms.

Plant Pathology - Branch of agriculture science which deals with study of plant diseases are called as ~~the~~ Plant Pathology.

The branch of agricultural science which deals with ~~the~~ symptom, cause, etiology, resulting losses, epidemiology, management of plant disease

PH of soil is neutral

Virus - Infectious nucleic acid - protein is called as virus
विषाणु

Viroid - ~~Virus~~ virus without protein coat,

~~bacter~~ bacteria - जीवाणु

Fungus - कवक / फंफूद / अश्ली

Ex of pathogen - fungi, bacteria, virus, nematodes,

12/9/25

R-108

L-111

Nuclear membrane is not well organised genetic material is float in a cytoplasm.

Date: / / Page no: _____

Prokaryotic -

Organism those who are having primitive (old) type of nucleus or (undeveloped nucleus) are called as prokaryotic organism.

Ex - Bacteria are prokaryotic organism.

Eukaryotic - Organism those are having well developed nucleus are called as eukaryotic organism.

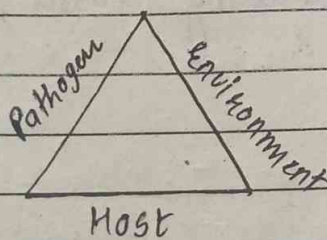
Ex - Fungi, algae, Nematode, Protozoa, (Plants, humans).

Factors both are

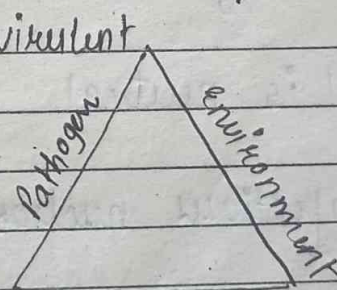
Mesobiotic + biotic - infectious disease causing agents.

abiotic - ~~is~~ non infectious.

Etiology - study of origin lifecycle and characteristics of disease causing agents is known as etiology.



↑ Avirulent
↓ virulent



↑ unfavourable
↓ favourable

Host Resistant

↓ vs Susceptible

Explain concept of disease triangle

Date: 25/9/25 Page no: _____

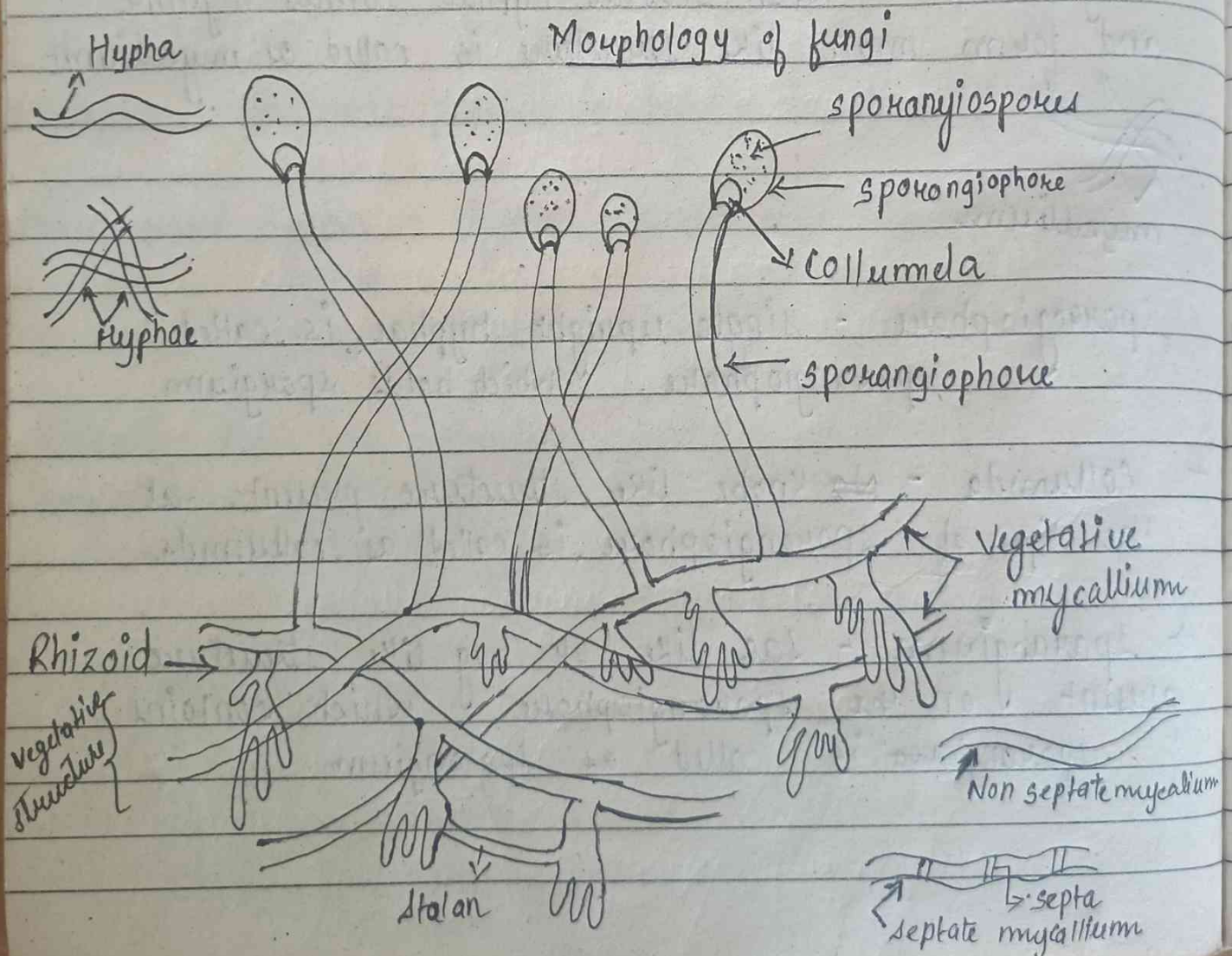
Disease causing triangle

For successful development of disease 3 components are required.

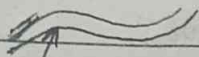
- 1) Susceptible host
- 2) Virulent
- 3) And favourable environment for pathogen.

If these 3 factors are present then only there will be development of disease.

→ If host is ~~not~~ resistant, environment is unfavourable and pathogen is a avirulent ~~and~~ then there will be no development of disease.



Fungi - Fungi is the multicellular filamentous or achlorophyllous sporebearing, ~~to~~ Heterotrophic living organism. Fungi are reproducing both sexual, asexual method of reproduction. Body of fungi is called as thallus.

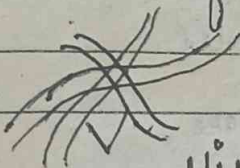


Hypha

Hypha -

Tubular single thread like tubular structure of fungi body is called as Hypha.

→ Mycelium - When several hyphae comes together and form mat like structure is called as mycelium.



mycelium

Sporangiophore - single upright hyphae, is called sporangiophore. which holds sporangium

→ Collumela - ~~No~~ Knobe like structure present. at the tip of sporangiophore is called as collumela.

→ Sporangium - Sac like or bag like structure present on the sporangiophore which contains spores is called as sporangium.

spore - unit of reproduction in fungi is called as spore

Rhizoid - Root like structure produced by fungi thallus which helps in to anchor hold tissue and absorb nutrients from it.

Stolon - Hyphae which joins 2 rhizoid is known as stolon.

* Epidemiology - It is a study of ^{effect of} environmental factors on occurrence and spread of diseases within population.



→ Septa - Crosswall present in hyphae is called as septa

→ Non septed hypha - Hypha without septa is called non septed

→ Septed hypha - Hyphae with septa is called septed hypha

Rhizoid - Root like structure produced by vegetative mycellium which help to hold surface as well as to absorb nutrients from tissue

Eukaryotic - organism in which genetic material is present inside the well organized nuclear membrane

Prokaryotic - ex - bacteria → Bacterial blight / oily spot of *Phormogonate*, bacterial blight of rice

Eukaryotic - ex - Fungi - ex - leaf spot, rust.

Algae - Red Rust of mango

Nematod. - Root Knot disease in brinjal & Tomato

Flowering Plant Parasite - ex - Armar veil (*Cuscuta*)

Explain diff disease causing agents in plants