''बेटी बचाओ, बेटी पढ़ाओ''

JAYOTI VIDYAPEETH WOMEN'S UNIVERSITY, JAIPUR

(Format for Preparing E Notes)

Faculty of FEM

Faculty Name- **JV'n Anupama Goyal (Associate Professor)**

Program- B.SC B.Ed IST/Semester / 23

Course Name - DIVERSITY OF MICROBES

Session No. & Name – 1.5/ 2023

Academic Day starts with –

- Greeting with saying **'Namaste'** by joining Hands together following by 2-3 Minutes Happy session, Celebrating birthday of any student of respective class and **National Anthem**.

Lecture Starts with-

Review of previous Session- …….

- Topic to be discussed today- Today We will discuss about …… reproduction in in FUNGUS……...
- Lesson deliverance (ICT, Diagrams & Live Example)-
  - PPT (10 Slides)
  - Diagrams

Introduction & Brief Discussion aboutthe Topic

- **Reproduction in fungi**
  Reproduction In fungi reproduction may take place by two methods; asexual and sexual. During both these processes spores are the essential structures (in mycology the term spore is used for any of meiospores are ascospores, basidiospores and sporangiospores of slime moulds and under mitospores, zoospores, aplanospores, conidia, uredospores are included under mitospores. The diploid body produced as a result of sexual fusion is known as zygote which in lower fungi is termed as resting spore, oospore or zygospore. In higher fungi, the zygote is represented by a diploid nucleus produced in a cell (ascus or basidium). This diploid nucleus after undergoing meiosis results in the formation of haploid nuclei serving as centres for haploid sexual spores called ascospores and basidiospores reproductive unit and is not necessarily the one after meiosis as in higher cryptogams). The spores formed after meiosis are called meiospores and those resulting from mitosis, mitospores.The ones falling under the category
- Vegetative reproduction – It takes place by following means:-
- (a) Fragmentation – The hyphae break into small fragments or pieces accidently or by external force. Each piece upon getting suitable conditions, germinates to form a new mycelium.
- (b) Fission – This method involves the splitting of cells into two daughter cells by the formation of a constriction followed by a cell wall formation. It is the most common method of vegetative multiplication found in bacteria and yeasts
- (c)Budding – In this method, a small bud is formed from the parent cell which gradually increases in size and receives a part of nucleus. A cell wall is formed which separates the daughter cell from the parent cell. Each bud after separating from the parent cell develops into a new individual. It is a common method of reproduction in yeast.
- (d)Sclerotia – These are perennating bodies formed by the compact masses of interwoven hyphae. Sclerotia under suitable conditions germinate to form new individuals e.g. Claviceps, Sclerotinia. (e)Rhizomorphs – These are root-like elongated mycelial strands. They remain dormant under unfavourable conditions and under favourable conditions develop into a new mycelium.
- Zoospores (Gr. Zoon= animal + sporos =seed, spore) are commonly found in many lower fungi e.g., Achlya, Saprolegnia, Pythium, Phytophthora, and Albugo. They are naked spores, which after swarming, encyst, secrete a cell wall and germinate by germ tube into a thallus. They are equipped with one or two flagella (sing. Flagellum; L. Flagellum = whip). They are of two types in fungi, the whiplash and tinsel. The whiplash flagellum as the name indicates acts as a _whip‘ (commonly used by a horseman) has a rigid basal portion and a short upper flexible region. The tinsel flagellum is a long hairy structure, consisting of a long rachis having hair like structures on all sides. The flagella originate from a granule like structure called blepharoplast, which lies deep in the rhizoplast (Gr. Rhiza=root+plastid). The flagellum is composed of 11 parallel fibrils, nine peripheral forming a cylinder around two central ones. Each fibril is composed of subfibrils. In a

whiplash flagellum, the two central fibrils are longer than peripheral, forming the whip and the bases of the fibrils are doubled up within zoospore forming the blepharoplasty

- Conidia – All asexual spores, other than sporangiospores (zoospores and aplanospores) are called conidia. They are produced externally on branched or unbranchedhyphal tips termed as conidiophores. The conidia may be formed singly or in chains. The conidial chains may be basipetal or acropetal in succession. Conidia may be uninucleate or multinucleate. The latter type is more common in the members of the form class Deuteromycetes. The shape, size and colour of the conidia vary greatly and hence have been utilised in the identification of many fungi. There are two main types of conidia (i) thallospores and (ii) conidiospores.
  - University Library Reference-

  - Online Reference if Any.net
  - Suggestions to secure good marks to answer in exam-
  - Explain answer with key point answers
  - Questions to check understanding level of students-
  - Small Discussion About Next Topic-
  - Academic Day ends with-

  National song**' Vande Mataram'**