

Fungi – Questions and Answers

Q1. What are fungi mainly?

Answer: Fungi are mainly heterotrophic organisms.

Q2. What are the thread-like structures in fungi called?

Answer: The thread-like structures are called hyphae.

Q3. What is the network of hyphae called?

Answer: The network of hyphae is called mycelium.

Q4. What is the fungal cell wall mainly made of?

Answer: The fungal cell wall is mainly composed of chitin.

Q5. What are fungi called that feed on dead organic matter?

Answer: They are called saprophytes.

Q6. What is the association between fungi and algae called?

Answer: The association is called lichen.

Q7. What is the association between fungi and roots of higher plants called?

Answer: It is called mycorrhiza.

Q8. Which fungus is unicellular?

Answer: Yeast is a unicellular fungus.

Q9. How does yeast mainly reproduce vegetatively?

Answer: Yeast reproduces mainly by budding.

Q10. Name an asexual spore found in fungi.

Answer: Conidia are asexual spores in fungi.

Q11. What is the fusion of protoplasm in fungi called?

Answer: It is called plasmogamy.

Q12. What is the fusion of nuclei in fungi called?

Answer: It is called karyogamy.

Q13. How is the dikaryotic phase represented in fungi?

Answer: The dikaryotic phase is represented as $n+n$.

Q14. What are coenocytic hyphae?

Answer: Coenocytic hyphae are multinucleate hyphae without septa.

Q15. What type of mycelium is found in phycomycetes?

Answer: Phycomycetes have coenocytic mycelium.

Q16. What are the motile spores of phycomycetes called?

Answer: They are called zoospores.

Q17. Which fungus is commonly known as bread mould?

Answer: Rhizopus is known as bread mould.

Q18. What are ascomycetes commonly called?

Answer: Ascomycetes are commonly called sac fungi.

Q19. On which structures are conidia produced?

Answer: Conidia are produced on conidiophores.

Q20. What are the sexual spores of ascomycetes called?

Answer: They are called ascospores.

Q21. What are the sac-like structures containing ascospores called?

Answer: They are called asci.

Q22. Which fungus is used in making bread and beer?

Answer: Saccharomyces is used in making bread and beer.

Q23. Which fungus produces penicillin?

Answer: Penicillium produces penicillin.

Q24. What organisms are commonly included in basidiomycetes?

Answer: Mushrooms are commonly included in basidiomycetes.

Q25. What is the fruiting body of basidiomycetes called?

Answer: It is called a basidiocarp.

Q26. Where are basidiospores produced?

Answer: Basidiospores are produced on basidia.

Q27. Which fungus causes rust disease?

Answer: Puccinia causes rust disease.

Q28. Which fungus causes smut disease?

Answer: Ustilago causes smut disease.

Q29. Why are deuteromycetes called imperfect fungi?

Answer: They are called imperfect fungi because only their asexual stage is known.

Q30. What are the asexual spores of deuteromycetes called?

Answer: The asexual spores are called conidia.

MCQs with Explanations

Fungi

1. **Fungi are mainly:**

- (a) Autotrophic
- (b) Heterotrophic
- (c) Chemotrophic

(d) Photosynthetic

Answer: (b) Heterotrophic

Explanation: Fungi cannot prepare their own food because they lack chlorophyll. They obtain nutrients from dead or living organisms.

2. The body of fungi is made up of thread-like structures called:

(a) Spores

(b) Hyphae

(c) Rhizoids

(d) Conidia

Answer: (b) Hyphae

Explanation: The fungal body consists of long, branching filaments called hyphae.

3. The network of hyphae is known as:

(a) Mycelium

(b) Sporangium

(c) Basidium

(d) Ascocarp

Answer: (a) Mycelium

Explanation: A mass or network of hyphae forms the mycelium, which is the vegetative part of fungi.

4. Cell wall of fungi is mainly composed of:

(a) Cellulose

(b) Peptidoglycan

(c) Chitin

(d) Lignin

Answer: (c) Chitin

Explanation: Fungal cell walls are mainly made of chitin, a tough nitrogen-containing polysaccharide.

5. Fungi that feed on dead organic matter are called:

- (a) Parasites
- (b) Saprophytes
- (c) Symbionts
- (d) Autotrophs

Answer: (b) Saprophytes

Explanation: Saprophytic fungi obtain food from decaying organic matter.

6. Association between fungi and algae is called:

- (a) Mycorrhiza
- (b) Symbiosis
- (c) Lichen
- (d) Parasitism

Answer: (c) Lichen

Explanation: Lichens are formed by a symbiotic association between algae and fungi.

7. Association between fungi and roots of higher plants is called:

- (a) Lichen
- (b) Mycorrhiza
- (c) Parasitism
- (d) Saprophytism

Answer: (b) Mycorrhiza

Explanation: Mycorrhiza is a mutually beneficial association between fungal hyphae and plant roots.

8. Which of the following fungi is unicellular?

- (a) Rhizopus
- (b) Mucor
- (c) Yeast
- (d) Penicillium

Answer: (c) Yeast

Explanation: Yeast is a single-celled fungus commonly used in fermentation.

9. Yeast reproduces vegetatively mainly by:

- (a) Fragmentation
- (b) Budding
- (c) Binary fission
- (d) Zoospores

Answer: (b) Budding

Explanation: In budding, a small outgrowth develops from the parent yeast cell and separates later.

10. Asexual spores in fungi include:

- (a) Ascospores
- (b) Basidiospores
- (c) Conidia
- (d) Oospores

Answer: (c) Conidia

Explanation: Conidia are non-motile asexual spores produced externally.

11. Fusion of protoplasm in fungi is called:

- (a) Karyogamy
- (b) Meiosis
- (c) Plasmogamy
- (d) Sporulation

Answer: (c) Plasmogamy

Explanation: Plasmogamy is the fusion of cytoplasm from two fungal cells.

12. **Fusion of nuclei in fungi is called:**

- (a) Plasmogamy
- (b) Karyogamy
- (c) Fragmentation
- (d) Budding

Answer: (b) Karyogamy

Explanation: Karyogamy refers to the fusion of nuclei after plasmogamy.

13. **The dikaryotic phase in fungi is represented by:**

- (a) $2n$
- (b) n
- (c) $n+n$
- (d) $3n$

Answer: (c) $n+n$

Explanation: In the dikaryotic stage, two haploid nuclei coexist without fusion.

14. **Coenocytic hyphae are:**

- (a) Septate
- (b) Multinucleate without septa
- (c) Uninucleate
- (d) Branched only

Answer: (b) Multinucleate without septa

Explanation: Coenocytic hyphae lack cross walls and contain many nuclei.

15. **Members of phycomycetes have:**

- (a) Septate mycelium
- (b) Coenocytic mycelium
- (c) No mycelium
- (d) Unbranched mycelium

Answer: (b) Coenocytic mycelium

Explanation: Phycomycetes possess aseptate, multinucleate hyphae.

16. **Motile spores of phycomycetes are called:**

- (a) Conidia
- (b) Aplanospores
- (c) Zoospores
- (d) Basidiospores

Answer: (c) Zoospores

Explanation: Zoospores are flagellated motile spores produced in some fungi.

17. **Bread mould belongs to:**

- (a) Penicillium
- (b) Rhizopus
- (c) Agaricus
- (d) Aspergillus

Answer: (b) Rhizopus

Explanation: Rhizopus commonly grows on bread and is called bread mould.

18. **Ascomycetes are commonly known as:**

- (a) Club fungi
- (b) Sac fungi
- (c) Imperfect fungi
- (d) Slime fungi

Answer: (b) Sac fungi

Explanation: They are called sac fungi because spores are formed inside sac-like asci.

19. **Conidia are produced on:**

- (a) Basidia
- (b) Asci
- (c) Conidiophores
- (d) Sporangia

Answer: (c) Conidiophores

Explanation: Conidiophores are specialized hyphae bearing conidia.

20. **Sexual spores of ascomycetes are:**

- (a) Basidiospores
- (b) Zoospores
- (c) Ascospores
- (d) Conidia

Answer: (c) Ascospores

Explanation: Ascospores are sexual spores produced within asci.

21. **Sac-like structures containing ascospores are called:**

- (a) Basidia
- (b) Asci

(c) Sporangia

(d) Hyphae

Answer: (b) Asci

Explanation: Asci are sac-like reproductive structures of ascomycetes.

22. **Which fungus is used in making bread and beer?**

(a) Agaricus

(b) Saccharomyces

(c) Puccinia

(d) Alternaria

Answer: (b) Saccharomyces

Explanation: Saccharomyces (yeast) ferments sugar to produce carbon dioxide and alcohol.

23. **Which fungus produces the antibiotic penicillin?**

(a) Rhizopus

(b) Penicillium

(c) Ustilago

(d) Agaricus

Answer: (b) Penicillium

Explanation: Penicillium produces the antibiotic penicillin discovered by Alexander Fleming.

24. **Basidiomycetes commonly include:**

(a) Mushrooms

(b) Yeasts

(c) Slime moulds

(d) Diatoms

Answer: (a) Mushrooms

Explanation: Mushrooms are common members of basidiomycetes.

25. **Fruiting body of basidiomycetes is called:**

- (a) Ascocarp
- (b) Basidiocarp
- (c) Sporangium
- (d) Conidiophore

Answer: (b) Basidiocarp

Explanation: The visible reproductive structure in mushrooms is the basidiocarp.

26. **Basidiospores are produced on:**

- (a) Ascus
- (b) Conidiophore
- (c) Basidium
- (d) Sporangium

Answer: (c) Basidium

Explanation: Basidiospores develop externally on club-shaped basidia.

27. **Rust fungus belongs to:**

- (a) Rhizopus
- (b) Aspergillus
- (c) Puccinia
- (d) Mucor

Answer: (c) Puccinia

Explanation: Puccinia causes rust disease in crops like wheat.

28. **Smut fungus belongs to:**

- (a) Ustilago

(b) Penicillium

(c) Neurospora

(d) Alternaria

Answer: (a) Ustilago

Explanation: Ustilago causes smut disease in cereals.

29. **Deuteromycetes are called imperfect fungi because:**

(a) They lack mycelium

(b) Only asexual stage is known

(c) They are unicellular

(d) They are aquatic

Answer: (b) Only asexual stage is known

Explanation: Sexual reproduction has not been observed in deuteromycetes.

30. **Asexual spores of deuteromycetes are:**

(a) Basidiospores

(b) Oospores

(c) Conidia

(d) Zoospores

Answer: (c) Conidia

Explanation: Deuteromycetes reproduce asexually mainly through conidia formation.