Class XI Biology Unit Test Biological Classification

Time Allowed: 1 Hour 30 Minutes Maximum Marks: 40

General Instructions

1. All questions are compulsory.
2. Read each question carefully before answering.
3. Draw neat and properly labelled diagrams wherever required.
4. Write scientific names correctly.

SECTION A – Multiple Choice Questions (1 × 6 = 6 Marks)

Q1. Who proposed the Five Kingdom Classification system?

(a) Aristotle (b) Linnaeus (c) R.H. Whittaker (d) Darwin

Q2. Which of the following organisms completely lacks a cell wall?

(a) Nostoc (b) Mycoplasma (c) Rhizopus (d) Amoeba

Q3. The cell wall of diatoms contains a large amount of:

(a) Cellulose (b) Chitin (c) Silica (d) Peptidoglycan

Q4. Which organism is responsible for causing red tides?

(a) Euglena (b) Gonyaulax (c) Amoeba (d) Paramoecium

Q5. The fungal class commonly known as sac-fungi is:

(a) Phycomycetes (b) Basidiomycetes (c) Ascomycetes (d) Deuteromycetes

Q6. Which of the following is an example of a viroid disease?

(a) Common cold (b) Potato spindle tuber disease (c) Malaria (d) Sleeping sickness

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SECTION B – Very Short Answer Questions (2 × 5 = 10 Marks)

Q7. Mention any two limitations of the two-kingdom classification system.

Q8. Differentiate between archaebacteria and eubacteria on the basis of their cell wall and habitat.

Q9. What are heterocysts? Name two organisms in which they are found.

Q10. Define the following terms:

(a) Plasmogamy (b) Karyogamy

Q11. What are phycobiont and mycobiont?

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SECTION C – Short Answer Questions **(3 × 4 = 12 Marks)**

Q12. Explain the four major groups of bacteria based on their shapes with suitable examples or diagrams.

Q13. Differentiate between chrysophytes, dinoflagellates and euglenoids on the basis of their important characteristics.

Q14. Describe the three main steps involved in sexual reproduction in fungi.

Q15. Write three important differences between viruses and viroids.

SECTION D – Long Answer Questions **(4 × 2 = 8 Marks)**

Q16. Explain the important characteristics of Kingdom Fungi. Also describe its four major classes with one example each.

Q17. Describe the structure and general characteristics of viruses. Explain the nature of their genetic material and protein coat.

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SECTION E – Application-Based Questions **(2 × 2 = 4 Marks)**

Q18. A student observes an organism under a microscope. It is unicellular, eukaryotic and possesses a flexible protein-rich outer covering instead of a cell wall. It can photosynthesise in sunlight but obtains food from other organisms in its absence.

(a) Identify the organism.

(b) Name its outer covering.

Q19. A farmer notices that certain bacteria are helping improve soil fertility by converting atmospheric nitrogen into usable forms.

(a) Name the specialised cells involved in nitrogen fixation in cyanobacteria.

(b) Give one example of a nitrogen-fixing cyanobacterium.