

## Microbiology Questions

1. To which kingdom do yeasts belong?
2. To which kingdom does *Rhizopus* belong?
3. What term is used for the form of asexual reproduction in bacteria?
4. Describe two ways in which the skin helps to defend the body against pathogenic micro-organisms.
5. What does the term pathogenic mean in relation to bacteria?
6. What do bacteria form when environmental conditions become unfavourable?
7. Other than being prokaryotic, state **two** ways in which a typical bacterial cell differs from a typical human cell (e.g. cell from cheek lining).
8. What are antibiotics?
9. Describe how some bacteria respond in order to survive when environmental conditions become unfavourable.
10. What is meant when a bacterium is described as being pathogenic?
11. To which kingdom do bacteria belong?
12. Distinguish between photosynthetic and chemosynthetic bacteria. Give an example of each type.
13. Name **two** forms of heterotrophic nutrition found in bacteria.
14. Explain what is meant by antibiotic resistance and suggest how it may develop.
15. What is a nutrient medium?
16. Give two meanings for the term sterile.
17. What is an antibiotic?
18. Antibiotics should not be prescribed for a person suffering from a viral infection. Suggest a reason for this.
19. Give examples of **two** harmful bacteria.
20. Briefly explain chemosynthesis.
21. Give **two** activities of symbiotic bacteria in the human digestive system.
22. What is meant by sterile?
23. How may apparatus be sterilised?
24. State **one** way in which yeast is beneficial to humans.
25. Name the nutrient medium on which you grew yeast
26. Give **two** industrial uses of the anaerobic respiration of yeast.

27. State **one** feature that indicates that *Rhizopus* belongs to the kingdom Fungi.
28. Yeasts are eukaryotic organisms. What does this mean?
29. To which kingdom do yeasts belong?
30. Saprophytic and parasitic fungi are widespread in nature. Explain each of the underlined terms.
31. Give **one** example of a beneficial fungus and **one** example of a harmful fungus.
32. State a function for each of the following structures that are found in fungi; rhizoid, sporangium, gametangium, zygospore.
33. What term is used to describe the nutrition of *Rhizopus*? Explain the importance of this type of nutrition in nature.
34. To what kingdom does *Rhizopus* belong?
35. Name another organism that you have studied in your biology course that belongs to the same kingdom as *Rhizopus*.
36. Distinguish between hypha and mycelium.
37. What are antibiotics? For what purpose are they used?
38. In the case of alkaline pyrogallol or an anaerobic jar state:
  1. An investigation in which you used it,
  2. The precise purpose for its use in the investigation that you have indicated.
39. What type of asexual reproduction is shown in yeast?
40. Which type of division, mitosis or meiosis, is involved in budding?
41. Name a fungus, other than yeast, that you studied during your course.
42. What are symbiotic bacteria?
43. What is fermentation?
44. To which kingdom does *Rhizopus* belong?
45. Name the container in which you grew the leaf yeast.
46. Give an example of a beneficial organism and of a harmful organism that belong to the same kingdom as *Rhizopus*.
47. In the case of starch or skimmed milk agar plates state the following:
  1. An investigation in which you used it,
  2. The precise purpose for its use in the investigation that you have indicated.
48. To which kingdom does *Amoeba* belong?
49. What does the animal plankton feed on?
50. Distinguish between batch and continuous flow food processing using micro-organisms in the food industry.

51. To which kingdom does *Rhizopus* belong?
52. Which term describes the mode of nutrition of *Rhizopus*?
53. What is the function of flagella on bacteria?
54. Name any **two** of the main bacterial types (shapes).
55. By which method do bacterial cells reproduce?
56. Some bacteria are *anaerobic*. What does this mean?
57. What are *pathogenic* bacteria?
58. Give **two** example of the economic importance of bacteria.
59. Explain how *Rhizopus* gets its food.
60. What form of heterotrophic nutrition does *Rhizopus* have?
61. Outline the importance of this type of nutrition in nature.
62. To what kingdom does *Rhizopus* belong?
63. Name **one** economically harmful fungus.
64. Mushrooms also belong to this kingdom. A restaurant owner decides to collect and cook wild mushrooms from a local forest. Suggest **one** reason why this may not be a good idea.
65. To which kingdom do bacteria belong?
66. For which purpose did you use petroleum jelly in the investigation of the growth of leaf yeast on agar plates?
67. For which purpose did you use antiseptic wash solution in the investigation of the growth of leaf yeast on agar plates?
68. *Rhizopus* is a member of the animal kingdom. **T or F**
69. Draw a labelled diagram of a single, reproducing, yeast cell.
70. From what plant can you obtain the yeast for the leaf yeast experiment?
71. Name the nutrient medium on which you grew the yeast for the leaf yeast experiment.
72. Outline the steps you followed to get the yeast cells onto the nutrient medium.
73. How long did it take for the yeast to become visible on the nutrient medium?
74. How did you recognise the yeast on the agar plates?
75. Describe one **aseptic** technique.
76. In relation to the fungus *Rhizopus*, give the function of the :
  - (i) rhizoids,
  - (ii) sporangium
77. Explain why the reproduction associated with the sporangium is asexual.

78. The nutrition of *Rhizopus* is described as being saprophytic. What does the term saprophytic mean?
79. Explain the importance of saprophytic nutrition in the overall scheme of nature.
80. Saprophytic nutrition is a form of heterotrophic nutrition. What does the term heterotrophic mean?
81. Name another form of nutrition employed by some fungi.
82. Give two examples of harmful members of the kingdom Fungi.