



BIOLOGY

BOOKS - CHETANA PUBLICATION

Useful and Harmful Microbes

Example

1. What is meant by microbes? What are their characteristics?



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2. How did you observe microbes?



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3. Find the odd man out:

Pneumonia, Diphtheria, Chickenpox, Cholera



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4. Identify the odd word out and say why it is the odd one?

Lactobacilli, rhizobia, yeast, clostridia.



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5. Identify the odd word out and say why it is the odd one?

Root rot, rust (tambera), rubella, mosaic.



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6. Find the odd man out:

AIDS, Hepatitis, Leprosy, Dengue.



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7. Find the odd man out:

Cholera, Leprosy, Pneumonia, Influenza.



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8. Find the odd man out:

Ampicillin, Amoxicillin, Penicillin, Tetracycline



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9. Find the odd man out:

Tetracycline, Penicillin,

Gentamycin, Erythromycin.



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1. The rod-shaped bacteria found in milk or buttermilk are called

A. Rhizobium

B. Clostridium

C. Lactobacilli

D. Saccharomyces

Answer:



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2. Yoghurt has a specific sour taste due to

A. lactic acid

B. citric acid

C. acetic acid

D. alcohol

Answer:



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3. _____ bacteria present in Root nodules of leguminous plants help in nitrogen fixation.

A. dostridium

B. streptococcus

C. Lactobacilli

D. Rhizobium

Answer:



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4. A mutually beneficial relationship is called

A. symbiosis

B. parasitism

C. autotropism

D. none of these

Answer:



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5. Carbon compounds obtained from bacteria and fungi for destroying or preventing the growth of harmful micro-organisms are called

A. probiotics

B. antibiotics

C. antibodies

D. antigens

Answer:



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6. Fungi release.....into the food, making the food poisonous.

A. cyanotoxins

B. dinotoxins

C. mycotoxins

D. cytotoxins

Answer:



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7.produce bottle-shaped endospores in adverse conditions.

A. Lactobacilli

B. Clostridium

C. Yeast

D. Rhizobium

Answer:



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8.conducted important research on the toxin responsible for gas gangrene and the antitoxin responsible for treating it.

A. Ida Bengtson

B. Van Ermengem

C. Louis Pasteur

D. Alexander Fleming

Answer:



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9. Name the following:

An alcohol which is used as a smokeless fuel.

A. Methanol

B. Ethanol

C. Petrol

D. Diesel

Answer:



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10. Antibiotics used against various strains of gram positive and gram negative bacteria.

A. bacteria

B. viruses

C. algae

D. fungi

Answer:



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11.is a broad-spectrum antibiotic

A. Gentamycin

B. Penicillin

C. Amoxicillin

D. Erythromycin

Answer:



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12.is a narrow-spectrum antibiotic

A. Ampicillin

B. Amoxicillin

C. Tetracyclin

D. Penicillin

Answer:



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13. Penicillin was first discovered by

A. Louis Pasteu

B. Alexander Fleming

C. Ida Bengston

D. Van Ermengem

Answer:



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14.Proved that the anaerobic bacterium *Clostridium botulinum* is responsible for food poisoning

Louis Pasteur

Ida Bengtson

Alexander Fleming

Emile Van Ermengem

A. Louis Pasteu

B. Ida Bengston

C. Alexander Fleming

D. Emile Van Ermengem

Answer:



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15. Write whether the following statements are true or false, if false correct the statement.

AIDS is caused by a virus.

A. virus

B. baderia

C. protozoa

D. fungi

Answer:



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16. Dengue is caused by

A. droplets spread in air

B. contact with infected person

C. mosquito bite

D. contaminated water and food

Answer:



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17. Bacterial pneumonia is caused by _____

A. virus

B. bacteria

C. fungi

D. protozoa

Answer:



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18.can be prevented by vaccination

A. Malaria

B. AIDS

C. Leprosy

D. Chicken pox

Answer:



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19. Malaria is caused by.....

A. protozoa

B. bacteria

C. fungi

D. virus

Answer:



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20. Bird flu and swine flu are caused by....

A. bacteria

B. protozoa

C. fungi

D. virus

Answer:



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21. The Lactobacilli convert lactose, the sugar in the milk into.....

lactic acid

acetic acid

alcohol

citric acid

A. lactic acid

B. acetic acid

C. alcohol

D. citric acid

Answer:



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22. The..... destroys harmful microbes present in the milk

high pH

neutral pH

low pH

none of these

A. high pH

B. neutral pH

C. low pH

D. none of these

Answer:



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23. Lactobacilli kill the harmful bacteria likepresent in the alimentary canal.

A. Rhizobium

B. Saccharomyces

C. Clostridium

D. Alcanivorax

Answer:



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24. Which of the following is a product of fermentation of carbohydrates by yeast ?

A. glucose and fructose

B. alcohol and carbon dioxide

C. proteins and fats

D. fatty acids and amino acids

Answer:



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25. Molasses is fermented with the help of yeast called.....

A. *Yarrowia lipolytica*

B. Alcanivorax

C. Rhizobia

D. Saccharomyces

Answer:



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26. A yeast.....is used to absorb the toxins released during the production of palm oil.

A. Yarrowia lipolytic

B. Alcanivorax

C. Saccharomyces cerevisiae

D. Penicillium

Answer:



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27. The bacteria which spoil cooked food are.....

A. Saccharomyces

B. Lactobacilli

C. Clostridium

D. Rhizobium

Answer:



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28.can grow and reproduce only in living cells.

A. Bacteria

B. Viruses

C. Fungi

D. Protozoa

Answer:



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29. Asexual reproduction occurs by budding in yeast.



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30. Explain the statements:

Toxins of fungal origin are called mycotoxins.



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31. Answer the following question:

How do Lactobacilli convert milk into yoghurt?



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32. What are the disadvantages of inorganic fertilizers?



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33. Explain the statements:

Amoxicillin is a broad-spectrum antibiotic



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34. Explain the statements:

Ethanol is produced by the fermentation of molasses.



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35. Explain the statements:

Clostridium bacteria produce bottle-shaped endospores



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36. Complete the statements using the proper option from those given below. Explain the statements:

Leguminous plants can produce more proteins due to.....



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37. Foam accumulates on the surface of 'dal' kept for a long time in summer.



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38. Why are naphthalene balls kept with clothes to be put away?



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39. Answer the following question:

How do Lactobacilli convert milk into yoghurt?



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40. Antibiotics can be taken only when prescribed by doctors.



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41. Nowadays, seeds are coated with Rhizobial solution or powder before sowing



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42. Antibiotics are not effective against common cold or influenza.



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43. Cotton fabrics, gunny bags, leather items and wooden items do not last long.



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44. Food on which fungi has grown cannot be eaten



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45. Write short notes:

Rhizobial inoculation.



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46. Write short notes:

Bio-remediation.



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47. Write short notes on:

Antibiotics.



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48. Write short notes:

Clostridium.



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49. Write down the modes of infection and the preventive measures against fungal disease.



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50. Write down the causative pathogen, mode of infection and preventive measures of AIDS.



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51. Write down the modes of infection and preventive measures against Bird Flu (H_7N_9) and Swine Flu (H_1N_1)



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52. Write down the modes of infection and preventive measures against Malaria and dengue



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53. Write down the modes of infection and preventive measures against Pneumonia



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54. Write down the modes of infection and preventive measures for leprosy.



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55. What are the modes of infection and preventive measures for Hepatitis?



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56. What are the modes of infection and preventive measures for Influenza?



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57. Which vaccines are given to infants? Why?



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58. Answer the following question:

How is a vaccine produced ?



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59. How do antibiotics cure disease?



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60. Are the antibiotics given to humans and animals the same? Why?



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61. Why is it necessary to safely store the pathogens of a disease against which vaccines are to be produced?



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62. How is bread made?



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63. What is the advantage of Rhizobium to farmers?



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64. How can we observe Lactobacilli in buttermilk



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65. What is fermentation?



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66. What is symbiosis? Give example



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67. Write the names of microbes found in the following food materials:

Yoghurt, Bread, Root Nodules of Leguminous plants, Idlim Dosa, Spoiled Potato Curry.



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68. Why are wineries located near Nashik in Maharashtra?



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69. Find out the uses of fungi to plants and animals?



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70. Use your brain power

What is the structure of lichen, a condiment?

Where else is it used?



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71. How is yoghurt made from milk? What exactly happens in this process?



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72. Sometimes, you may notice a black powder or white discs floating on the pickle or murabba, when a jar is opened after a long time. What exactly is this? Why are such food items not good to eat?



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73. How many different industries depend upon the Lactobacilli bacteria?



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74. Answer the following question:

Which types of cottage industries and factories can be started in areas with abundant milk production?



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75. Which changes do you notice in leather articles and gunny (jute) bags during the rainy season?



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76. Which changes do you notice in leather articles and gunny (jute) bags during the rainy season?



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77. Why do those leather articles not get spoilt during the summer or winter?



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78. Why do doctors advise you to take yoghurt or buttermilk if you have indigestion or abdominal discomfort?



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79. Sometimes, yoghurt becomes bitter and froths up. Why does this happen?



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80. Which different milk products are obtained at home by fermentation of the cream from the milk?



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81. Recently, it has been made compulsory in India and some other countries to mix 10% ethanol with fuels like petrol and diesel. What is the reason for this?



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82. Chapattis made from wheat only swell up but bread becomes spongy, soft and easy to digest. Why is it so?



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83. Salt is applied on the inner surface of pickle jars and the pickle is covered with oil. Why is this done?



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84. Which preservatives are mixed with ready-to eat foods to prevent them from spoiling?



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85. Use your brain power

Which plant and animal diseases are caused by micro-organisms and what are the measures to be taken against them?



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86. Complete the following table:

The spread and prevention of disease

	Name of disease	Pathogen	Mode of infection	Preventive measures
(1)	Malaria	Protozoa		
(2)	Dandruff, ringworm, scabies			Personal hygiene, avoiding contact with infected person.
(3)	Pneumonia			Vaccination, avoiding contact with infected person.
(4)	Hepatitis		Contaminated water and food.	
(5)	AIDS	Virus		Safe sexual contact, avoid reuse of needles and injections.
(6)	Bird Flu (H_1N_1) Swine Flu (H_1N_1)	Virus	Contact with infected birds and animals.	Personal hygiene, properly cooked meat.



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87. Different species of Clostridium bacteria and the diseases caused by them.



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88. Bring 'active dry yeast' from the market.

Mix a spoonful of yeast, two spoonful sugar

with a sufficient quantity of lukewarm water in

a bottle. Fix a colourless, transparent balloon

on the mouth of that bottle. What changes do

you observe after 10 minutes? Mix limewater

with the gas accumulated in the balloon.

Collect that lime water in a beaker and

observe it. What do you notice?

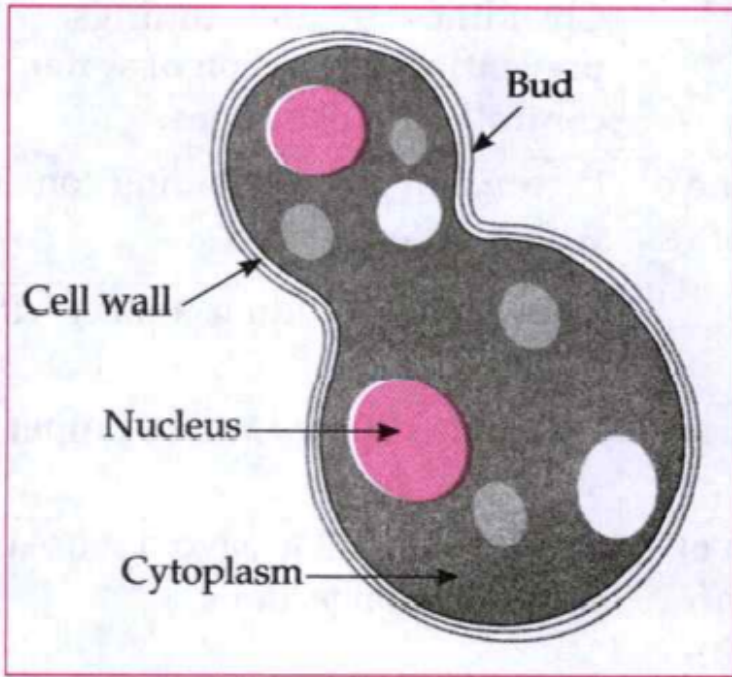


Fig. 8.1: Yeast



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89. How is alcohol produced?



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90. Answer the following question:

What are the uses of Lactobacilli?



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91. What is Penicillin? What is it used for?



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92. How was the antibiotic penicillin discovered?



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93. What are the precautions to be followed while taking antibiotics?



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94. How can we observe Rhizobium bacteria in the roots of leguminous plant?



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95. Antibiotics mainly act against.....

bacteria

viruses

algae

fungi

A. bacteria

B. viruses

C. algae

D. fungi

Answer:



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96. AIDS is caused by.....

A. virus

B. bacteria

C. protozoa

D. fungi

Answer:



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97. The..... destroys harmful microbes

present in the milk

high pH

neutral pH

low pH

none of these

A. high pH

B. neutral pH

C. low pH

D. none of these

Answer:



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98. The bacteria which spoil cooked food are.....

A. Saccharomyces

B. Lactobacilli

C. Clostridium

D. Rhizobium

Answer:



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99. Name the following: Two names of bad bacteria.



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100. Complete the analogy

Swine flu : H1N1 : : Bird Flu :



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101. State whether the following statements are true or false. Correct the false statements:

Yoghurt has a specific sour taste due to acetic acid



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102. Find the odd man out:

Ampicillin, Amoxycillin, Penicillin, Tetracycline



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103. Antibiotics can be taken only when prescribed by doctors.



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104. Food on which fungi has grown cannot be eaten



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105. Nowadays, seeds are coated with Rhizobial solution or powder before sowing



[Watch Video Solution](#)

106. Write down the modes of infection and preventive measures against Malaria and dengue



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107. Answer the following question:

How is a vaccine produced ?



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108. What is fermentation?



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109. Use your brain power

What is the structure of lichen, a condiment?

Where else is it used?



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110. Find out the uses of fungi to plants and animals?



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111. Answer the following question:

What are the uses of Lactobacilli?



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112. Which changes do you notice in leather articles and gunny (jute) bags during the rainy season?



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113. Chapattis made from wheat only swell up but bread becomes spongy, soft and easy to digest. Why is it so?



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114. How is alcohol produced?



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115. How was the antibiotic penicillin discovered?



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Exercise

1. Complete the analogy

Dengue : Virus :: Malaria :.....



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2. Complete the analogy

Hepatitis: Virus :: Pneumonia :.....



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3. Complete the analogy

Cholera : Bacteria :: Swine flu :.....



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4. Complete the analogy

Swine flu : H1N1 :: Bird Flu :.....



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5. Complete the analogy

Measles: Virus :: Ringworm :.....



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6. Yoghurt : Lactobacilli :: Bread : _____



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7. Complete the analogy

Oil spills: Alcanivorax :: Absorption of

arsenic.....



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8. Complete the analogy

Rhizobium : Nitrogen fixation : : Clostridium

:.....



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9. Match the columns:

Column 'A'	Column 'B'
(1) Leprosy	(a) Virus
(2) Ringworm	(b) Fungi
(3) Influenza	(c) Protozoa
(4) Malaria	(d) Bacteria



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10. Match the columns

Column 'A'	Column 'B'
(1) Leprosy	(a) Virus
(2) Ringworm	(b) Fungi
(3) Influenza	(c) Protozoa
(4) Malaria	(d) Bacteria



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11. State whether the following statements are true or false. Correct the false statements:

Lactobacilli are aerobic bacteria



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12. State whether the following statements are true or false. Correct the false statements:

Lactobacilli converts lactose sugar into alcohol.



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13. State whether the following statements are true or false. Correct the false statements:

Yoghurt has a specific sour taste due to acetic acid



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14. State whether the following statements are true or false. Correct the false statements:

The bacteria *Clostridium* are present in the root nodules of leguminous plants.



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15. State whether the following statements are true or false. Correct the false statements:

Yeast cell is a prokaryotic cell.



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16. State whether the following statements are true or false. Correct the false statements:

The use of Rhizobium has helped to reduce the use of chemical fertilizers.



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17. State whether the following statements are true or false. Correct the false statements:

Ethanol is a smokeless and high quality fuel.



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18. State whether the following statements are true or false. Correct the false statements:

A yeast, *Saccharomyces cerevisiae* is used for absorbing toxins released during palm oil production.



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19. State whether the following statements are true or false. Correct the false statements:

Gentamycin is a narrow-spectrum antibiotic.



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20. State whether the following statements are true or false. Correct the false statements:

Antibiotics mainly act against bacteria.



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21. State whether the following statements are true or false. Correct the false statements:

Oil spills in oceans are cleared with the help of Clostridium bacteria



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22. State whether the following statements are true or false. Correct the false statements:

Tetracycline is a narrow-spectrum antibiotic.



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23. State whether the following statements are true or false. Correct the false statements:

Amoxicillin is a broad-spectrum antibiotic.



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24. State whether the following statements are true or false. Correct the false statements:

Penicillin is a group of antibiotics obtained from a fungus *Saccharomyces*.



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25. State whether the following statements are true or false. Correct the false statements:

Antibiotic Penicillin was discovered by Alexander Fleming



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26. State whether the following statements are true or false. Correct the false statements:

The bacteria Lactobacilli cause food-poisoning.



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27. State whether the following statements are true or false. Correct the false statements:

Clostridium bacteria grow in aerobic conditions only



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28. Write whether the following statements are true or false, if false correct the statement.

AIDS is caused by a virus.



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29. State whether the following statements are true or false. Correct the false statements:

Influenza is caused by a bacteria.



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30. State whether the following statements are true or false. Correct the false statements:

Antibiotics useful to one person can be suggested to others also.



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31. State whether the following statements are true or false. Correct the false statements:

Dengue is caused by a bacteria.



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32. State whether the following statements are true or false. Correct the false statements:

Dandruff and ringworm are caused by fungi.





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33. State whether the following statements are true or false. Correct the false statements:

Pneumonia is spread through droplets spread in air by infected person



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34. State whether the following statements are true or false. Correct the false statements:

Chicken pox spread due to contaminated food and water.



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35. State whether the following statements are true or false. Correct the false statements:

Ida Bengston was honoured with the 'Typhoid Medal' in 1947.



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