



BIOLOGY

BOOKS - MBD

MICROBES IN HUMAN WELFARE



1. Give the scientific name of Brewer's yeast.

2. State one difference between wine and whisky.
Watch Video Solution

3. Expand LAB.

Watch Video Solution

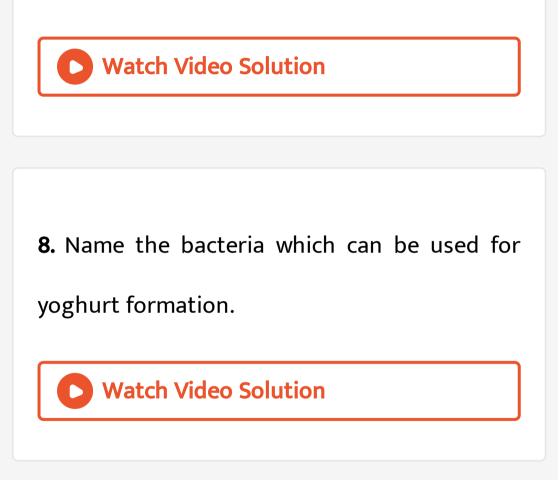
4. What do you mean by ripening of cheese?

5. Name the raw material from which gin is obtained.



6. Cheese prepared in India homes is processed or unprocesed.

7. What is cottage cheese?



9. Name the enzymes which cause leavening.

10. Name the microbe which is a source leavening.



11. Name the microbe which is a streptomycin.



12. Name the bioactive molecule used in lowering of blood cholestrol.
Watch Video Solution

13. Name the fungus which is a source of

cyclosporin A

14. Which microbe is involved in production of

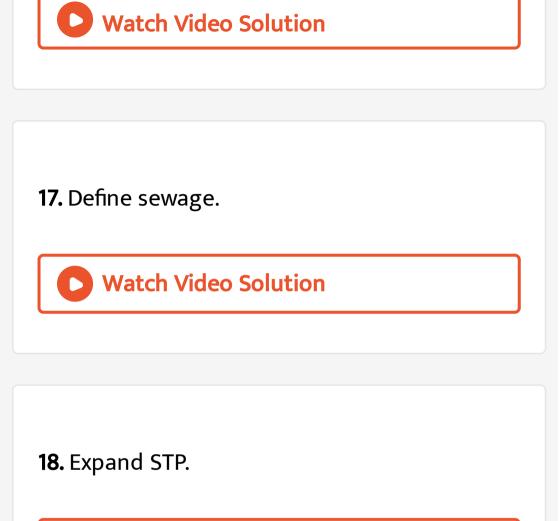
ethanol on commerical scale?



15. Which microbes are employed to produce biogas?



16. What is significance of biogas?





19. Why is secondary treatment also called

biological treatment?

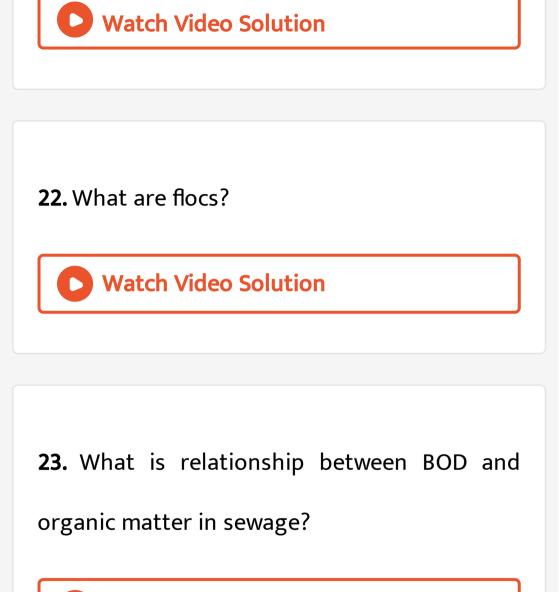
Watch Video Solution

20. Explain the different steps involved in the

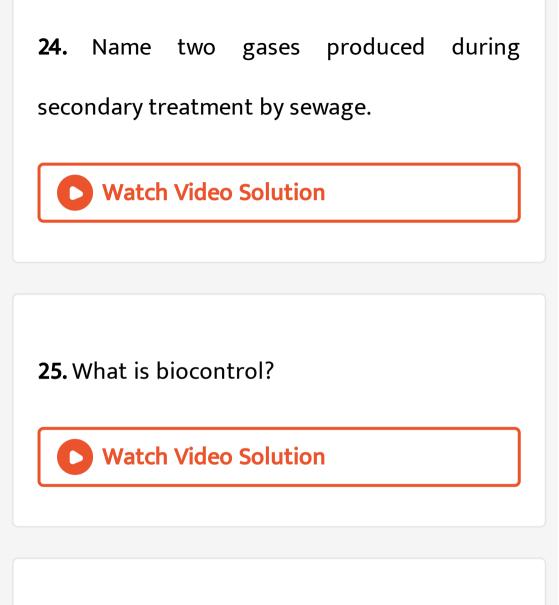
secondary treatment Of sewage.

Watch Video Solution

21. What is primary sludge?

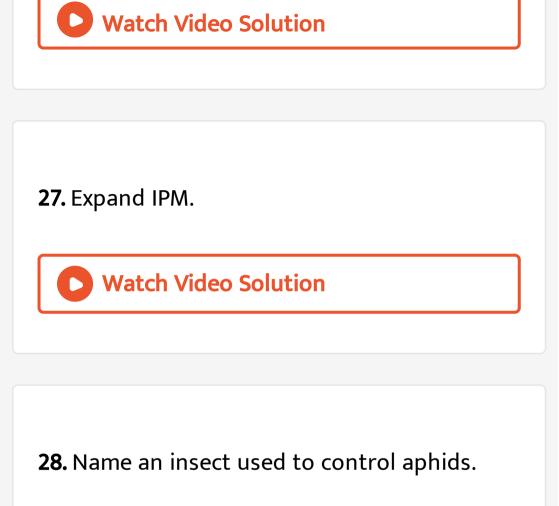






26. Name a genetically modified plant which is

resistant to pests.





29. Bacteria cannot be sern with the naked eyes, but these ran be seen with the help of a microscope. If you have to carry a sample from your home to your biology laboratory to demonstrate die presence of microbes under a microscope, which sample would you carry and why?



30. Give examples to prove that microbes

release gases during metabolism.



31. In which food would you find lactic acid bacteria? Mention some of their useful applications.

32. Name some traditional Indian foods made of wheat , rice and Bengal gram (or their products which involve using microbes).



33. In which way have microbes played a major

role fn controlling diseases caused by harmful

bacteria?



34. Name any two species of fungus, which are

used In the production of the antibiotics.



35. What is sewage? In which way can this be

harmful?

36. What is the key difference between primary

and secondary sewage treatment?

Watch Video Solution

37. Do you think microbes can also he used as

source of energy? If yes. how?

38. Microbes can be used to decrease the use of chemical fertilisers and pesticides.Explain how this can be accomplished.



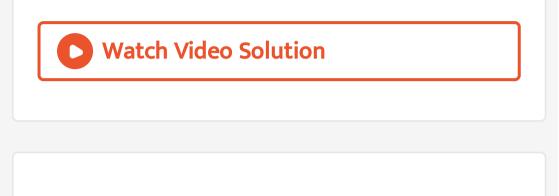
39. Three water samples namely river water, untreated sewage water and secondary effluent discharged from a sewage treatment plant were subjected to BOD tcsl. The samples were labelled A, B and C: but the laboratory attendant did not note which was which, The BOD values of the three samples A, B and C were recorded as 20mg/L. 8mg/L and 400mg/L. respectively. Which sample of the water is most polluted? Can you assign the correct label to each assuming the river water is relatively clean?

Watch Video Solution

40. Find out the name of the microbes from which Cyclosporin A (an Immunosuppressive

drug) and Statins (hlond cholesterol lowering

agents) are obtained.



41. Find out the role of microbes in Uric followingand discuss it with your teacher: Single cell protein (SCP)

42. Find out the role of microbes in Uric followingand discuss it with your teacher: Soil

Watch Video Solution

43. Arrange the following In the decreasing order (most important list) of their importance, for the welfare of human society. Give reasons for your answer: Biogas



44. Arrange the following In the decreasing order (mosi important lirst) of their importance, for the welfare of human society. Give reasons for your answer: Citric acid.



45. Arrange the following In the decreasing order (mosi important lirst) of their importance, for the welfare of human society. Give reasons for your answer: Penicillin and Curd



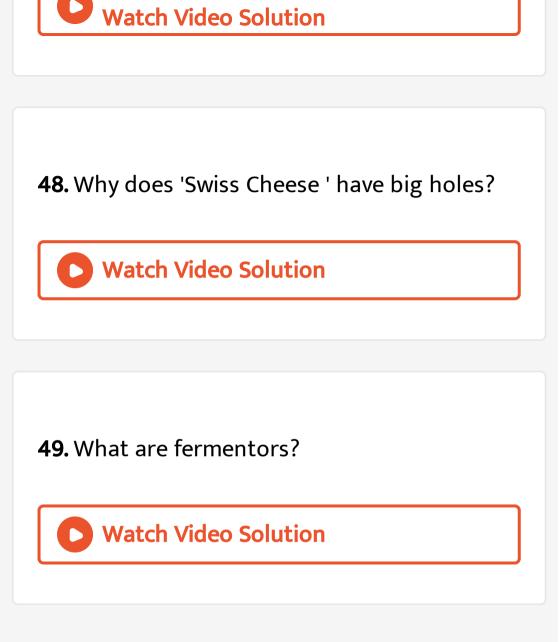
46. Arrange the following In the decreasing order (most important list) of their importance, for the welfare of human society. Give reasons for your answer: Biogas

Watch Video Solution

47. How do biofertilisers enrich the fertility of

the soil?





50. Name a microbe used for statin production. How do statins lower blood cholestrol level?

Watch Video Solution

51. Why do we prefer to call secondary wastewater treatment as biological

treatment?

52. What for nucleopoly-hedro viruses(NVP)

are being used now-a-days?



53. How has the discovery of antibiotics helped

mankind in the field of medicine?

54. Why is distillation required for producing

certain alcoholic drinks?

Watch Video Solution

55. Write the most important characteristic

that aspergillus niger, Clostridium

acetobutylicum And Lactobacillus share?

56. What would happen if our intestine harbours microbial flora exactly similar to that found in the rumen of catlle?



57. Give any two microbes that are useful in

biotechnogy.



restriction endonuclease?



59. Name any genetically modified crop.

Watch Video Solution

60. Why are blue-green algae not popular as

biofertilizers?



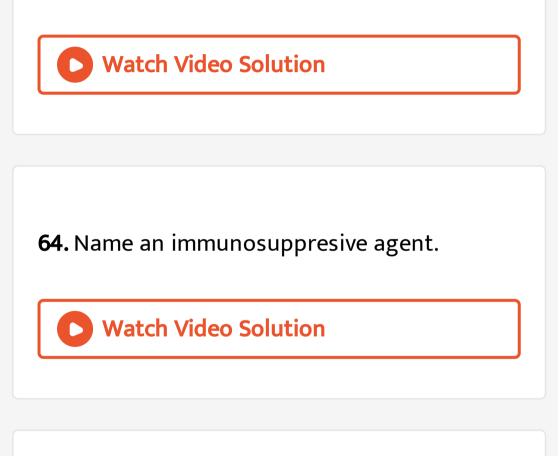
61. Which species of Penicillum produces Roquefort cheese?

Watch Video Solution

62. Name the states involved in Ganga Action

Plan.

enzymes.



65. Give an example of a rod-shaped virus.

66. Name the bacteria present in the Rumen of

cattle.



67. Name a microbe used for the production of

'Swiss Cheese'.



68. What is chakravarthy bug? Give its scientific name nd its application.
Watch Video Solution

69. Why are flocs important in biographical

treatment of waste water?

70. How has the bacterium Bacillus thuringiensis helped us in controlling caterpillars of insect pests?

Watch Video Solution

71. How do mycorrhizal fungi help the plants

harbouring them?

72. Why are cyanobacteria considered useful in

paddy fields?



73. How was penicillin discovered?

Watch Video Solution

74. Name the scientists who were credited for

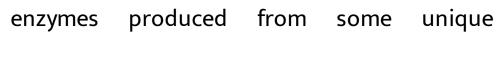
showing the role of penicillin as an antobiotic



75. How do bioactive molecules of fungal origin help in restoring good health of humans?

Watch Video Solution

76. What roles do enzymes play in detergent that we use for washing clothes? Are these

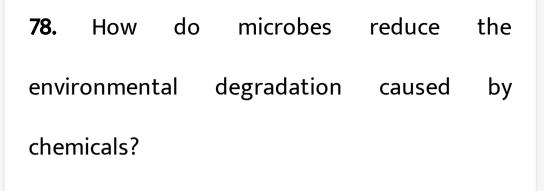


microorganisms?



77. What is the chemical nature of biogas? Name an organism which is involved in biogas production.







79. What are broad spectrum antibiotics.



80. What are viruses parasiting bacteria called? Draw a well labelled diagram of the same.



81. Which bacterium is used as clot buster?



82. What are biofertilizers ? Give two examples.



83. Why is aerobic degradation more important than anaerobic degradation for the treatment of large volumes of waste water in organic matter. Discuss.

Watch Video Solution

84. Discuss about the major programmes that

the Ministry of Environment and Forests,

Government of India, has initiated for saving

major Indian rivers from pollution.



85. Ganga has recently been declared the national river. Discuss the implication with respect to pollution of this river.



86. Draw a diagrammatic sketch of biogas

plant and lebel its various components.

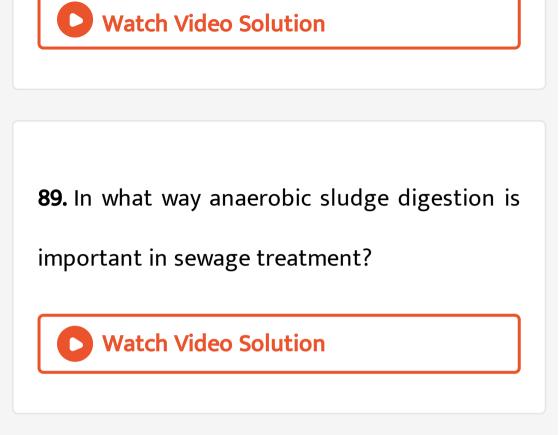


87. Describe the main ideas behind the

biological control of pests and diseases.



88. effects of sewage discharge on a river.



90. In which food would you find lactic acid bacteria? Mention some of their useful applications.

91. Which conditions have to be provided so as

to culture the yeast?

Watch Video Solution

92. The vitamin whose content increases following the conversion of milk into curd by lactic acid bacteria is:

A. vitamin C

B. vitamin D

C. vitamin B_{12}

D. vitamin E

Answer:



93. Waste water treatment generates a large

quantity iof sludge, which can be treated by:

A. digesters

B. activated sludge

C. chemicals

D. oxideation pond

Answer:



94. Methanogenic bacteria are not found in:

A. rumen of cattle

B. gobar gas plant

C. bottom of water-logged paddy fields

D. activated sludge

Answer:

Watch Video Solution

95. What is incubation period? What is the span of incubation period in case of AIDS?

96. The primary treatment of waste water involves the removal of :

A. dissolved impurities

B. satble particles

C. toxic substances

D. harmful bacteria

Answer:

97. BOD of waste water is estimated by

measuring the amount of

A. total organic matter

B. biodegradable organic matter

C. oxygen evolution

D. oxygen consumption

Answer:

98. Which one of the following alcoholic drinks

is produced without distillation?

A. wine

B. whisky

C. rum

D. brandy

Answer:

99. The technology of biogas production from cow dung was developed in Indian largely due to the efforts of:

A. Gas Authority of India

B. Oil and Natural Gas Commission

C. Indian Agricultural Research Institute

and Khadi & Village Industries

Commission

D. Indan Oil Corporation

Answer:



100. The free -living fungus Trichoderma can be used for:

A. killing insects

B. biological control of plant diseases

C. controlling butterfly caterpillars

D. producing antibodics

Answer:





101. What would happen if oxygen availability to activated sludge flocs is reduced?

A. It will will slow down the act of

degradation of of organic matter

B. The centre of flocs will become anoxic,

which would cause death of bacteria and

eventually breakage of flocs

C. Flocs would increase in size as anaerobic

bacteria would grow around flocs

D. Protozoa would grow in large numbers

Answer:

Watch Video Solution

102. Mycorrhiza does not help the host plant

in :

D. Increasing its resistance to insects.

Answer:

103. Which one of the following is not a nitrogen -fixing organism?

A. Anabaena

B. Nostoc

C. Aztobacter

D. Pseudomonas

Answer:

104. Big hole in Swiss cheese are made by a

A. a machine

B. a bacterium that produces methane gas

C. a bacterium producing a large during its

metabolic activities.

D. a fungus that releases a lot of gases

during its metabolic activities.

Answer:

105. The residue left after methane production

from cattle drug is:

A. burnt

B. buried in land fills

C. Used as manure

D. Used in civil construction

Answer:

106. Methanogens do not produce :

A. Oxygen

B. methane

C. hydrogen sulphide

D. carbon dioxide

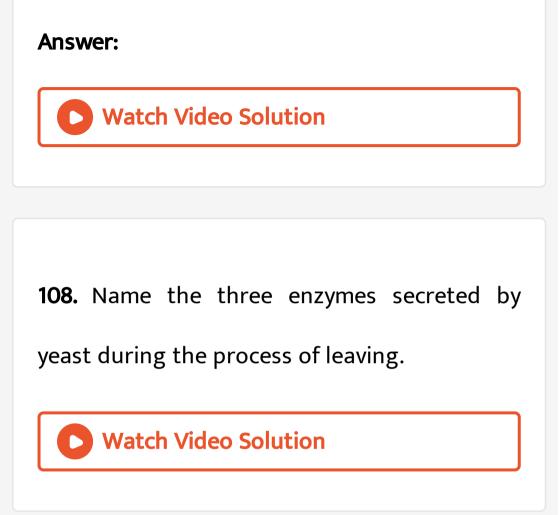
Answer:

107. Activated sludge should have the ability to settle quickly so that it can:

A. be rapilly pumped back from sedimentation tank to aerotion tank
B. absob pathogenic bacteria present in waste water while sinking to the bottom of the settling tank

C. be discared and anaerobically digested

D. absorb colloidal organic matter



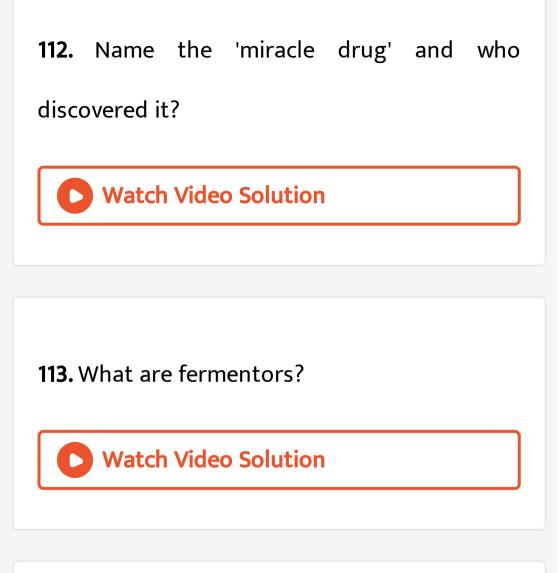
109. How are living yeast cells immobilized?

110. Name the original wild strain of the mould

by which vitamin B_2 is produced.

Watch Video Solution

111. Name the different vitamins which are produced by micro-organisms.



114. What are bioreactors?

115. Name a microbe used for statin production. How do statins lower blood cholestrol level?

Watch Video Solution

116. Name the group of organisms and the

substrate that act on to produce biogas.

117. Nme the bacterium responsible for the large holes seen in Swiss Cheese". What are these holes due to ?

Watch Video Solution

118. What for nucleopoly-hedro viruses(NVP)

are being used now-a-days?

119. Name the type of association that genus

Glomus exhibits with higher plant.

Watch Video Solution

120. Write an alternate source of protein for

animal and human nutrition.

121. Write any two places where methanogens

can be found.

Watch Video Solution

122. How does addition of small amount of curd to fresh milk,help formation of curd ? Mention a nutritional quality that get added to the curd.



123. Make a list of milk products obtained from

the activities of bacteria.



124. Expand 'LAB'. How are LABs beneficial to

humans? (write any two benefits).

125. List three examples of antibiotics that are

industrially viable. Give their source.



126. What is the difference between rum and whisky?



127. What are the substrates used for vinegar production? Name the micro-organism involved in its production.



128. Give one major use of lipase enzyme. Give

the source of invertase enzyme.



129. Name the substances by the fermentation

of which , whisky, beer, wine, brandy and rum

can be prepared.

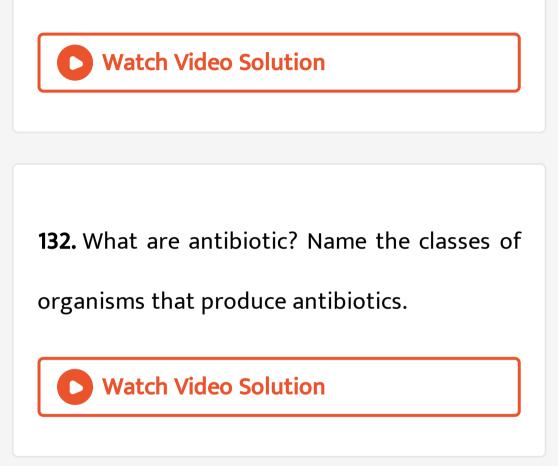


130. Make a table showing industrial products

obtained from activities of bacteria.



131. List the properties of antibiotics.



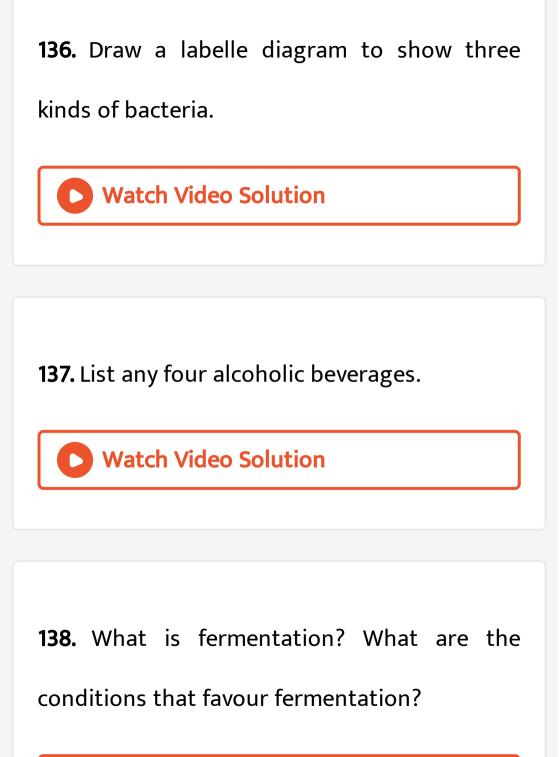
133. How do antibodies act?

134. What is Cyclosporin A? What is its

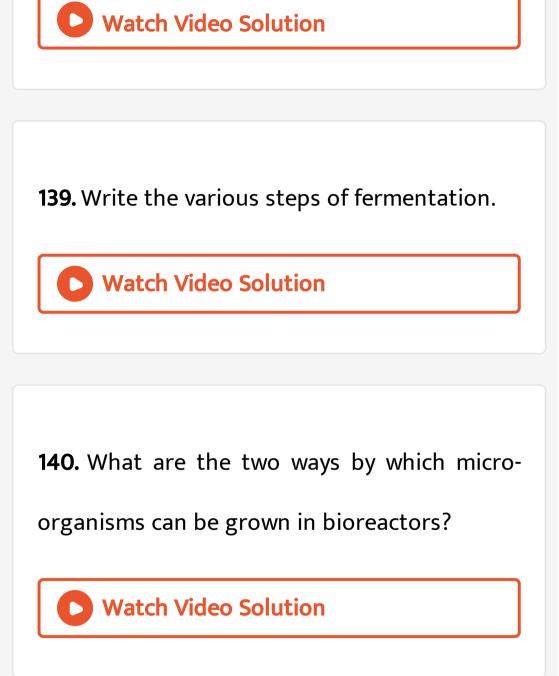
importance?



135. Define statins. What is the role with respect to cholesterol?



r -



141. Name the organic acids produced industrially by micro-organisms.
Watch Video Solution

142. Name the micro-organism associated in

the manufacture of

Vinegar

143. Name the micro-organisms associated in

the manufacture of

Alcohol



144. Name the micro-organisms associated in

the manufacture of

Tetracycline

145. Name the micro-organisms associated in

the manufacture of

Citric acid.

Watch Video Solution

146. Give a flow chart of sewage treatment.

Watch Video Solution

147. What is "Secondary treatment" of sewage?





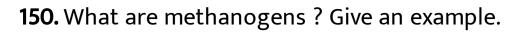
148. Give the advantages of using activited

sludge process.

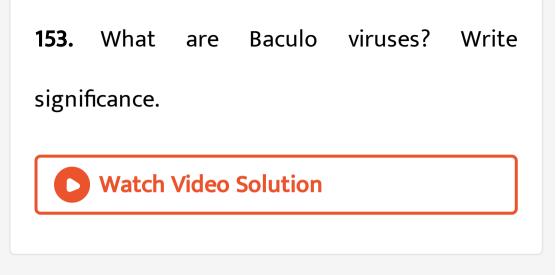


149. Differences between primary sludge and

activated sludge.



Watch Video Solution
151. Where do you find methanogens?
Watch Video Solution
152. Draw a simple diagram to show anaerobic
sludge digester.
Watch Video Solution



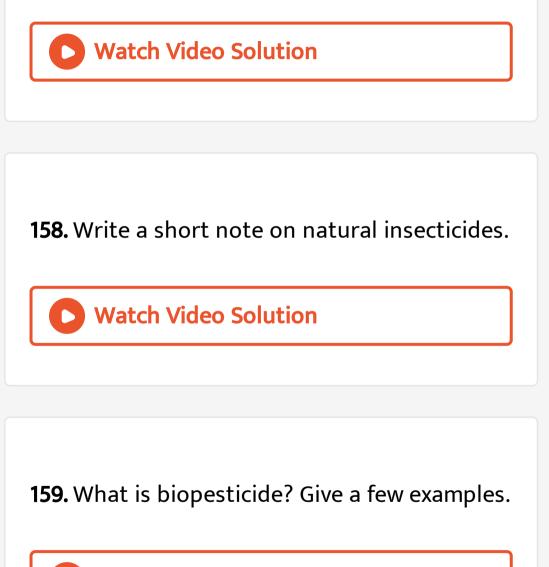
154. Give the full form of Bt. Name the insects killed by it.



155. Name the toxins produced by B. thuringiensis.
Watch Video Solution

156. Which nitrogen fixers are availbale on commercial basis in market ? Also name the beneficial crop.





160. Explain the basis of biological control of

weeds.

Watch Video Solution

161. What are biofertilizers? Name two organism which fix nitrogen asymbiotically and two organisms with fix symbiotically.



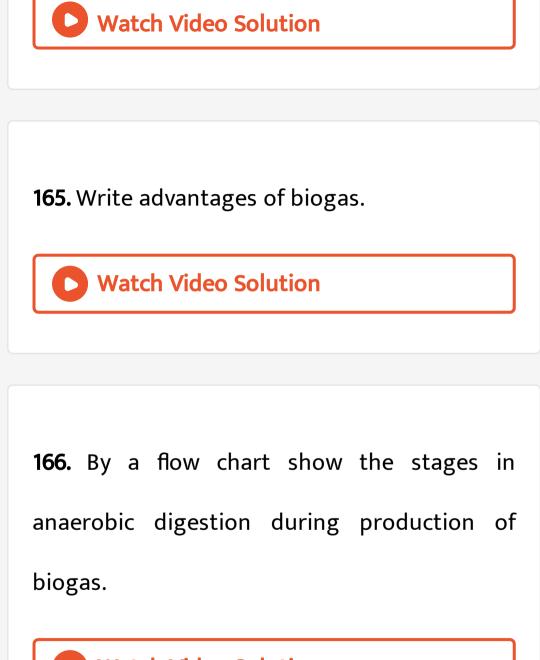
162. Why are biofertilizers or biopesticides
prefered to chemical fertilizers or pesticides?
Watch Video Solution

163. What is biogas? What are its components

? What is the calorific value of biogas?



164. Name some organic wastes.



167. Name a free living and a symbiotic bacterium that serves as biofertilizer. Why are they called so?

168. Distinguish between the roles of flocs and

anaerobic sludge digester in sewage

treatment.

Watch Video Solution

169. Name the blank spaces a, b, c and d from

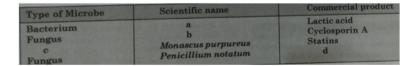
the table given below:

Type of microbe	Scientific name	Product	Medical application	
(i) Fungus	a	Cyclosporin	b	
(<i>ii</i>) c	Manascus purpureus	Statin	d	

Watch Video Solution

170. Name the blank spaces a, b, c and d from

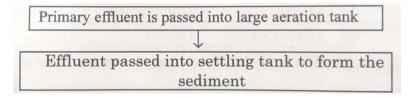
the table given below:





171. Large quantity of sewage is generated every day in cities and towns, Which is treated in Sewage Treatment Plants (STPs) to make it less polluted. Given below is the flow diagram of one of the stages of STP.Observe the given flow diagram and answer

the questions accordigly.

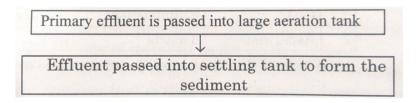


Why is primary effluent passed into large aeration tanks?



172. Large quantity of sewage is generated every day in cities and towns, Which is treated in Sewage Treatment Plants (STPs) to make it less polluted. Given below is the flow diagram of one of the stages of STP.

Observe the given flow diagram and answer the questions accordigly.

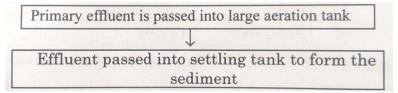


Write the technical term used for the

sediment formed. MEntion its significance.



173. Large quantity of sewage is generated every day in cities and towns. Which is treated in Sewage Treatment Plants (STPs) to make it less polluted. Given below is the flow diagram of one of the stages of STP. Observe the given flow diagram and answer the questions accordigly.



Why is primary effluent passed into large

aeration tanks?



174. Your advice is sought to improve the nitrogen content of the soil to be used for cultivation of a non-leguminous terrestrial crop.

Recommend two microbes that can enrich the

soil with nitrogen.



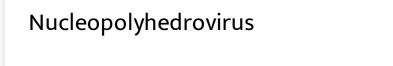
175. Your advice is sought to improve the nitrogen content of the soil to be used for cultivation of a non-leguminous terrestrial crop.

Why do leguminous crops not require such enrichment of the soil?

Watch Video Solution

176. Given below is a list of six microorganisms.

State their usefulness to humans.



Watch Video Solution

177. Given below is a list of six microorganisms.

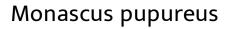
State their usefulness to humans.

Saccharomyces cerevisiae

Watch Video Solution

178. Given below is a list of six microorganisms.

State their usefulness to humans.





179. Given below is a list of six microorganisms.

State their usefulness to humans.

Trichoderma polysporum

Watch Video Solution

180. Given below is a list of six microorganisms. State their usefulness to



181. Given below is a list of six microorganisms.

State their usefulness to humans.

Propionibacterium sharmanii.



182. Describe primary and secondary treatment of domestic sewage before it is released for reuse.



183. Explain biological control of pests and plant pathogens with examples.



184. You have been deputed by your school principal to train local villagers in the use of biogas plants. With the help of a labelled sketch explain the various parts of the biogas plant.

Watch Video Solution

185. Name the toxins produced by B. thuringiensis.





187. Some industrial products are derived from

fungi. Name the fungi.

188. Which one of the following is the baker's

yeast used in fermentation?

A. Saccharum barberi,

B. saccharomyces cerevisiae

C. Sonalika

D.

Answer:

189. Milk starts to coagulate when Lactic Acid Bacteria (LAB) is added to milk as a starter. Mention two benefits which LAB provides.

190. Why are the fruit juices bought from market clearer as compared to those made at home?

Watch Video Solution

191. Name the bioactive molecule produced by Trichoderma polysporum and Monascus purpureus.



192. Why is a slurry of cattle dung(gobar) added to bio-wastes in the tank of a gobar gas

plant for generation of biogas?



1. Match the items in column 'A' and 'B' and the

choose correct answer

14.00	Column A		Column B
(i)	Lady bird beetle	(a)	Methano bacterium
(11)	Mycorrhiza	<i>(b)</i>	Trichoderma
	Biological control	(c)	Aphids
			Glomus

The correct answer is:

A. i b, ii d, iii c, iv a

B. i c, ii d, iii c , iv a

C. i d, ii a, iii b, iv c

D. i c, ii b, iii a, iv d

Answer:

Watch Video Solution

2. Which one is the most important role of microorganism for the well-being of humans?

A. sewage treatment

B. production of methane

C. biological control of plant disease

D. conversion of milk to curd.

Answer:

Watch Video Solution

3. Which bacteria is responsible for the

formation of curd from milk?

A. Name any two industrically important enzymes.
Watch Video Solution

5. Why are blue-green algae not popular as

biofertilizers?

6. How do mycorrhizal fungi help the plants

harbouring them?

Watch Video Solution

7. List three examples of antibodics that are industrially viable.



8. What is the difference between whisky and

rum?

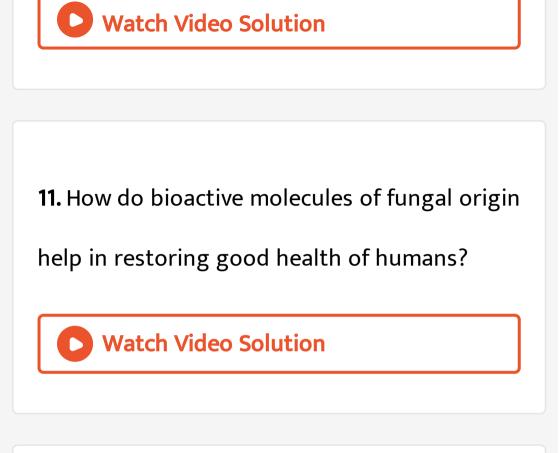
Watch Video Solution

9. Make a list of milk products obtained from

the activities of bacteria.

Watch Video Solution

10. What is biopesticide? Give a few examples.



12. How do microbes reduce the environmental

degradation caused by chemicals?



13. Draw a diagrammatic sketch of biogas

plant and lebel its various components.



14. Describe primary and secondary treatment

of domestic sewage before it is released for

reuse.

15. During sewage treatment , biogases are produced which include:

A. methane, oxygen, hydrogen sulphide

B. hydrogen sulphide, methane, sulphuer

dioxide

C. hydrogen sulphide, nitrogen, methane

D. methane, hydrogen sulphide, carbon

dioxide







16. Homozygous purelines in cattle can be obtained by:

A. mating of related indiviuals of same breed.

B. mating of unrelated individuals of same

breed.

C. mating of individuals of different breed.

D. mating of individuals of different species



:



17. The biggest constraint of plant breeding is

A. avialability of describle gene in the crop

and its wild relatives

B. infrasturcture

C. trained manpower

D. transfer of genes from unrelated

sources.

Answer:



18. Recently chickengunya cases were reported

form various parts of the country. Name the

vectors responsible for the same.



19. What causes swelling of the lower limbs in

patients suffering from Filariasis?

Watch Video Solution

20. How do neutrophils act as cellular barrier

to pathogens in human?

21. Name of the two types of cells in which HIV multiplies after gaining entry into human body?



22. A multinational company outside India tried to sell new varieties of turmeric without proper patent right. What is such an act refereed to as?



23. How do virus infected cells provide immunity to health cells?

Watch Video Solution

24. Name the organism that causes large hole

in Swiss cheese. How are these holes formed?

25. Why is using tobacco in any form injurious

to the health? Explain.

Watch Video Solution

26. Give the technical names of microbes which provide commercial products. Name the products.

27. Why do sports person often fall to a victim

to cocaine addition?

Watch Video Solution

28. Give a flow chart of the part of the life cycle

of his parasite passed in the insect.

29. Name the causal agent of disease Amoebiasis.Write its symptoms and prophylaxis.



30. Difference between primary and secondary

lymphoid organs.



31. Name the type of immunity, that is present

at the time of birth in humans. Explain any two

ways by which it is accomplished.



32. Write in detail about AIDS.



33. Describe the role of microbes in the

production of enzymes.

Watch Video Solution

34. What is biological control? What are advantages of adapting biological control as a method of controlling plant diseases and pest.



35. Explain intraspecific hybridisation. Give example.Watch Video Solution

36. What is plant breeding? Describe main steps involved in breeding a new genetic variety of crop.

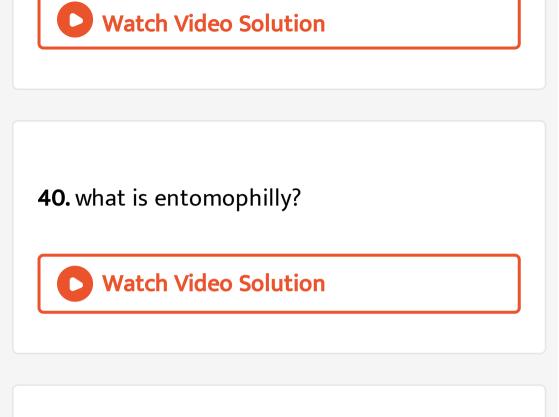
37. Mention three factors responsible for green revolution.
Watch Video Solution

38. How can do bread and cheese come to

have spongy texture?



39. Differentiate beer and rum



41. Name the blank spaces a, b, c and d from

the table given below:

ype of microbe	Scientific name	Product	Medical application
i) Fungus	a	Cyclosporin	b
(ii) c	Manascus purpureus	Statin	d



42. Name any three diseases caused by mosquitoes. Also give genus of mosquito vectors.



43. Write in detail about modes of transmission and symptoms of pneumonia disease.



44. Explain briefly preventive measures against

communicable diseases.



45. Explain cell - mediated Immune system in detail.

Watch Video Solution

46. Describe various Cannabinoids (products of Hemp plant) and their effects.



47. What do you mean by direct transmission

of diseases ? List four ways by which direct

transmission of diseases takes place.