

Microbes in Human Welfare — Assignment 1

Class 12 Biology · Topic-wise question bank covering every concept of the chapter · Narayan Gurukul Academy

Instructions: (1) Attempt all questions. This worksheet walks through every concept of the chapter, topic by topic.
(2) The interactive MCQ version of these questions (with instant answer reveal) is available on the notes page.
(3) Universal values: $g = 10 \text{ m/s}^2$ unless stated. Give answers with correct SI units.

Microbes in Household Products

MCQ Questions (choose the correct option)

1. Curd is formed by
 - (A) lactic acid bacteria
 - (B) yeast
 - (C) mould
 - (D) virus
2. The microbe used in bread-making is
 - (A) yeast
 - (B) mould
 - (C) bacterium
 - (D) virus
3. Lactic acid bacteria convert lactose into
 - (A) lactic acid
 - (B) alcohol
 - (C) glucose
 - (D) protein
4. The holes in Swiss cheese are made by
 - (A) CO_2 from bacteria
 - (B) yeast
 - (C) mould
 - (D) virus

1 Mark Questions

1. Which microbe forms curd?
2. Which microbe makes bread rise?
3. Which bacterium gives Swiss cheese its holes?

2 Mark Questions

1. Name the microbes used in the production of curd and cheese.
2. What is the role of lactic acid bacteria in the human body?

3 Mark Questions

1. Describe the uses of microbes in household products.
2. Describe the process of cheese-making.

Industrial Production — Fermented Beverages, Antibiotics and More

MCQ Questions (choose the correct option)

1. The microbe used for ethanol production is
 - (A) yeast
 - (B) mould
 - (C) bacterium
 - (D) virus
2. The first antibiotic discovered was
 - (A) penicillin
 - (B) streptomycin
 - (C) tetracycline
 - (D) chloramphenicol
3. Penicillin was discovered from
 - (A) *Penicillium notatum*
 - (B) *Streptococcus*
 - (C) *Lactobacillus*
 - (D) Yeast
4. Citric acid is produced by
 - (A) *Aspergillus niger*
 - (B) yeast
 - (C) bacteria
 - (D) virus

1 Mark Questions

1. Which microbe produces ethanol?
2. Name the first antibiotic.
3. Name one organic acid produced by a microbe.

2 Mark Questions

1. Who discovered penicillin?
2. Name two antibiotics produced by microbes.

3 Mark Questions

1. Describe the production of fermented beverages.
2. Describe the role of microbes in industrial production.

Sewage Treatment

MCQ Questions (choose the correct option)

1. Sewage treatment has
 - (A) primary and secondary stages
 - (B) one stage
 - (C) three stages
 - (D) four stages
2. The biological stage of sewage treatment uses

- (A) aerobic bacteria
 - (B) viruses
 - (C) fungi only
 - (D) algae
3. BOD is a measure of
- (A) organic pollution
 - (B) temperature
 - (C) pH
 - (D) colour
4. Anaerobic bacteria digest the
- (A) sludge
 - (B) water
 - (C) air
 - (D) soil

1 Mark Questions

1. What is sewage?
2. What is BOD?
3. Which bacteria digest sludge?

2 Mark Questions

1. What is the role of anaerobic bacteria in sewage treatment?
2. Why is BOD a measure of pollution?

3 Mark Questions

1. Describe the two stages of sewage treatment.
2. Explain the role of aerobic and anaerobic bacteria in sewage treatment.

Biogas Production

MCQ Questions (choose the correct option)

1. Biogas is mainly
 - (A) methane
 - (B) carbon dioxide
 - (C) nitrogen
 - (D) oxygen
2. Biogas is produced by
 - (A) methanogens
 - (B) viruses
 - (C) algae
 - (D) protozoa
3. Biogas is a
 - (A) renewable energy source
 - (B) fossil fuel
 - (C) mineral

- (D) metal
4. Biogas production is carried out in a
- (A) digester
 - (B) fermenter
 - (C) bioreactor
 - (D) reactor

1 Mark Questions

1. What is biogas?
2. Name the microbes involved in biogas production.
3. What is the main component of biogas?

2 Mark Questions

1. Why is biogas a clean fuel?
2. Name one organism used in biogas production.

3 Mark Questions

1. Describe the production of biogas.
2. Explain the importance of biogas.

Biocontrol Agents

MCQ Questions (choose the correct option)

1. A biocontrol agent for aphids is the
 - (A) ladybird
 - (B) beetle
 - (C) butterfly
 - (D) moth
2. *Bacillus thuringiensis* controls
 - (A) insects
 - (B) weeds
 - (C) fungi
 - (D) viruses
3. Biological control is
 - (A) eco-friendly
 - (B) harmful
 - (C) expensive
 - (D) slow
4. The fungal biocontrol agent is
 - (A) *Trichoderma*
 - (B) *Rhizobium*
 - (C) *Azotobacter*
 - (D) *Mycorrhiza*

1 Mark Questions

1. What is a biocontrol agent?
2. Name one biocontrol agent.
3. Which bacterium controls caterpillars?

2 Mark Questions

1. Give two examples of biocontrol agents.
2. How does *Bacillus thuringiensis* work?

3 Mark Questions

1. Explain the use of biocontrol agents.
2. Why is biological control preferred over chemical pesticides?

Biofertilisers

MCQ Questions (choose the correct option)

1. Rhizobium fixes
 - (A) nitrogen
 - (B) phosphorus
 - (C) potassium
 - (D) carbon
2. Mycorrhiza is a symbiotic association of a fungus with
 - (A) roots
 - (B) leaves
 - (C) stem
 - (D) fruit
3. Biofertilisers
 - (A) enrich soil nutrients
 - (B) kill pests
 - (C) add pesticides
 - (D) reduce fertility
4. Azotobacter is a
 - (A) free-living nitrogen fixer
 - (B) pathogen
 - (C) fungus
 - (D) virus

1 Mark Questions

1. What is a biofertiliser?
2. Name two biofertilisers.
3. What is mycorrhiza?

2 Mark Questions

1. What is the role of Rhizobium in agriculture?
2. What is the role of mycorrhiza?

3 Mark Questions

1. Explain the role of Rhizobium and mycorrhiza in agriculture.
2. Describe the types of biofertilisers.