CHAPTER 4

Microbes in Human Welfare

Microbes in Household & Industrial Product

1. Identify the microorganism which is responsible for the production of an immunosuppressive molecule cyclosporin A: *(2022)*

a. *Streptococcus cerevisiae*
b. *Trichoderma polysporum*
c. *Clostridium butylicum*
d. *Aspergillus niger*

2. Match List-I with List-II. *(2021)*

List-I		List-II	
(A)	*Aspergillus niger*	(i)	Acetic Acid
(B)	*Acetobacter aceti*	(ii)	Lactic Acid
(C)	*Clostridium butylicum*	(iii)	Citric Acid
(D)	*Lactobacillus*	(iv)	Butyric acid

Choose the correct answer from the options given below.

a. A-i B-ii C-iii D-iv
b. A-ii B-iii C-i D-iv
c. A-iv B-ii C-i D-iii
d. A-iii B-i C-iv D-ii

3. Match the following columns and select the correct option. *(2020)*

Column-I		Column-II	
1.	*Clostridium butylicum*	(i)	Cyclosporin-A
2.	*Trichoderma polysporum*	(ii)	Butyric acid
3.	*Monascus purpureus*	(iii)	Citric acid
4.	*Aspergillus niger*	(iv)	Blood cholesterol lowering agent

	(1)	(2)	(3)	(4)
a.	(ii)	(i)	(iv)	(iii)
b.	(i)	(ii)	(iv)	(iii)
c.	(iv)	(iii)	(ii)	(i)
d.	(iii)	(iv)	(ii)	(i)

4. For the commercial and industrial production of Citric Acid, which of the following microbes is used? *(2020-Covid)*

a. *Lactobacillus sp*
b. *Saccharomyces cerevisiae*
c. *Clostridium butylicum*
d. *Aspergillus niger*

5. Cyclosporin A, used as immuno-suppression agent, is produced from: *(2020-Covid)*

a. *Saccharomyces cerevisiae*
b. *Penicillium notatum*
c. *Trichoderma polysporum*
d. *Monascus purpureus*

6. Match the following organisms with the products they produce *(2019)*

A. *Lactobacillus*	i. Cheese
B. *Saccharomyces cerevisiae*	ii. Curd
C. *Aspergillus niger*	iii. Citric Acid
D. *Acetobacter aceti*	iv. Bread
	v. Acetic Acid

Select the correct option.

	(A)	(B)	(C)	(D)
a.	(ii)	(iv)	(v)	(iii)
b.	(ii)	(iv)	(iii)	(v)
c.	(iii)	(iv)	(v)	(i)
d.	(ii)	(i)	(iii)	(v)

7. Which of the following is a commercial blood cholesterol lowering agent? *(2019)*

a. Cyclosporin A b. Statin
c. Streptokinase d. Lipases

8. Conversion of milk to curd improves its nutritional value by increasing the amount of: *(2018)*

a. Vitamin D b. Vitamin A
c. Vitamin B_{12} d. Vitamin E

9. Which of the following is correctly matched for the product produced by them? *(2017-Delhi)*

a. *Acetobacter aceti* : Antibiotics
b. *Methanobacterium* : Lactic acid
c. *Penicillium notatum* : Acetic acid
d. *Saccharomyces cerevisiae* : Ethanol

10. Match Column-I with Column-II and select the correct option using the codes given below *(2016-II)*

Column-I		Column-II	
A.	Citric acid	i.	*Trichoderma*
B.	Cyclosporin A	ii.	*Clostridium*
C.	Statins	iii.	*Aspergillus*
D.	Butyric acid	iv.	*Monascus*

Codes:

a. A-i B-iv C-ii D-iii
b. A-iii B-iv C-i D-ii
c. A-iii B-i C-ii D-iv
d. A-iii B-i C-iv D-ii

11. Which of the following is wrongly matched in the given table? *(2016-I)*

	Microbe	Product	Application
a.	*Trichoderma*	Cyclosporin A	Immunosuppressive drug
b.	*Monascus*	Statins	Lowering of blood cholesterol
c.	*Streptococcus*	Streptokinase	Removal of clot from blood vessel
d.	*Clostridium butylicum*	Lipase	Removal of oil stains

12. Match the following list of microbes and their importance: *(2015 Re)*

A.	*Saccharomyces cerevisiae*	i.	Production of immunosuppressive agents
B.	*Monascus purpureus*	ii.	Ripening of Swiss cheese
C.	*Trichoderma polysporum*	iii.	Commercial production of ethanol
D.	*Propionibacterium sharmanii*	iv.	Production of blood cholesterol lowering agents

a. A-iv B-iii C-ii D-i
b. A-iv B-ii C-i D-iii
c. A-iii B-i C-iv D-ii
d. A-iii B-iv C-i D-ii

13. A good producer of citric acid is: *(2013)*

a. *Saccharomyces* b. *Aspergillus*
c. *Pseudomonas* d. *Clostridium*

Microbes in Sewage Treatment

14. Which of the following is put into Anaerobic sludge digester for further sewage treatment? *(2020)*

a. Floating debris b. Effluents of primary treatment
c. Activated sludge d. Primary sludge

15. Which of the following in sewage treatment removes suspended solids? *(2017-Delhi)*

a. Tertiary treatment b. Secondary treatment
c. Primary treatment d. Sludge treatment

16. During sewage treatment, biogases are produced which include: *(2013)*

a. Hydrogen sulphide, nitrogen, methane
b. Methane, hydrogen sulphide, carbon dioxide
c. Methane, oxygen, hydrogen sulphide
d. Hydrogen sulphide, methane, sulphur dioxide

Microbes as Biocontrol Agents

17. Match the following columns and select the correct option: *(2020-Covid)*

Column-I		Column-II	
1.	Dragonflies	(i)	Biocontrol agents of several plant pathogens
2.	*Bacillus thuringiensis*	(ii)	Get rid of Aphids and mosquitoes
3.	Glomus	(iii)	Narrow spectrum insecticidal applications
4.	Baculoviruses	(iv)	Biocontrol agents of lepidopteran plant pests
		(v)	Absorb phosphorus from soil

	(1)	(2)	(3)	(4)
a.	(ii)	(i)	(iii)	(iv)
b.	(ii)	(iii)	(iv)	(v)
c.	(ii)	(iv)	(v)	(iii)
d.	(iii)	(v)	(iv)	(i)

18. Which of the following can be used as a biocontrol agent in the treatment of plant disease? *(2019)*

a. *Trichoderma* b. *Chlorella*
c. *Anabaena* d. *Lactobacillus*

19. Select the correct group of biocontrol agents. *(2019)*

a. *Bacillus thuringiensis*, Tobacco mosaic virus, Aphids
b. *Trichoderma*, Baculovirus, *Bacillus thuringiensis*
c. *Oscillatoria*, *Rhizobium*, *Trichoderma*
d. *Nostoc*, *Azospirillium*, *Nucleopolyhedrovirus*

Answer Key

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
b	d	a	d	c	b	b	c	d	d	d	d	b	c	c	b	c

18	19
a	b