Microbes in Human Welfare

Question 1.

A nitrogen fixing microbe associated with the fern Azolla in rice fields is

- (a) Frankia
- (b) Rhizobium
- (c) Spirulina
- (d) Anabaena

Answer:

(d) Anabaena

Question 2.

Azolla pinnata has been found to be an important biofertiliser for paddy crops. This quality is due to the presence of

- (a) N₂ fixing bacteria
- (b) N₂ fixing cyanobacteria
- (c) mycorrhizae
- (d) all of these

Answer:

(b) N₂ fixing cyanobacteria

Question 3.

Which of the following is widely used as a successful biofertiliser in Indian rice field?

- (a) Rhizobium
- (b) Acacia arabica
- (c) Acalypha indica
- (d) Azolla pinnata

Answer:

(d) Azolla pinnata

Question 4.

Which of the following options incldes biofertilscrs?

- (a) cowdung manure and farmyard waste
- (b) A quick growing crop ploughed back into the field
- (c) Nostoc, Oscillatoria
- (d) All of these

Answer:

(c) Nostoc, Oscillatoria

Question 5.

Which of the following is a non-symbiotic biofertiliser?

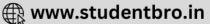
- (a) VAM
- (b) Azotobacter
- (c) Anabaena
- (d) Rhizobium

Answer:

(b) Azotobacter







Question 6.

Nitrogen fixation in root nodules of Alnus is brought about by

- (a) Frankia
- (b) Azorhizobium
- (c) Bradyrhizobium
- (d) Clostridium

Answer:

(a) Frankia

Question 7.

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 B₁₂
- (d) vitamin E

Answer:

(c) vitamin B₁₂

Question 8.

Wastewater treatment generates a large quantity of sludge, which can be treated by

- (a) anaerobic digesters
- (b) floe
- (c) chemicals
- (d) oxidation pond

Answer:

(a) anaerobic digesters

Question 9.

Methanogenic bacteria are not found in

- (a) rumen of cattle
- (b) gobar gas plant
- (c) bottom of water-logged paddy field
- (d) activated sludge

Answer:

(d) activated sludge

Question 10.

The primary treatment of wastewater involves the removal of

- (a) dissolved impurities
- (b) stable particles
- (c) toxic substances
- (d) harmful bacteria

Answer:

(b) stable particles

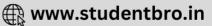
Question 11.

BOD of wastewater is estimated by measuring the amount of

- (a) total organic matter
- (b) biodegradable organic matter







- (c) oxygen evolution
- (d) oxygen consumption

Answer:

(d) oxygen consumption

Question 12.

Which one of the following alcoholic drinks is produced without distillation?

- (a) Wine
- (b) Whisky
- (c) Rum
- (d) Brandy

Answer:

(a) Wine

Question 13.

The free-living fungus Trichoderma can be used for

- (a) killing insects
- (b) biological control of plant diseases
- (c) controlling butterfly caterpillars
- (d) producing antibiotics

Answer:

(b) biological control of plant diseases

Ouestion 14.

Mycorrhiza does not help the host plant in

- (a) enhancing its phosphorus uptake capacity
- (b) increasing its tolerance to drought
- (c) enhancing its resistance to root pathogens
- (d) increasing its resistance to insects

Answer:

(d) increasing its resistance to insects

Question 15.

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

- (a) Anabaena
- (b) Nostoc
- (c) Azotobacter
- (d) Pseudomonas

Answer:

(d) Pseudomonas

Question 16.

Which of the following microbes is a proteinacious infectious agent?

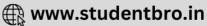
- (a) Fungi
- (b) Prions
- (c) Bacteria
- (d) Protozoa

Answer:

(b) Prions







Question 17.

The nutritive medium for growing bacteria and many fungi in laboratory is called

- (a) growth media
- (b) suspension media
- (c) culture media
- (d) colonial media

Answer:

(c) culture media

Question 18.

The inoculum is added to the fresh milk in order to convert milk into curd, the term 'inoculum' here refers to

- (a) a starter rich in vitami Bp
- (b) a starter rich in proteins
- (c) a starter containing milions of LAB
- (d) an aerobic digester

Answer:

(c) a starter containing milions of LAB

Question 19.

Which of the following organisms is used in the production of beverages?

- (a) Penicillium notatum
- (b) Saccharomyces cerevisiae
- (c) Aspergilus niger
- (d) Clostridium butylicum

Answer:

(b) Saccharomyces cerevisiae

Question 20.

Which of the following options contains the end products formed during anaerobic respiration in yeast ?

- (a) H_2O , CO_2 and energy
- (b) H_2S , $C_6H_{12}O_6$ and energy
- (c) CO₂, C₂H₅OH and energy
- (d) H₂O and CO₂

Answer:

(c) CO₂, C₂H₅OH and energy

Question 21.

The chemical substances produced by some microbes which can kill or retard the growth of other microbes are called

- (a) antiseptics
- (b) antacids
- (c) antibiotics
- (d) all of these

Answer:

(c) antibiotics



Question 22.

Antibiotics are obtained from

- (a) bacteria
- (b) fungi
- (c) actinomycetes
- (d) all of these

Answer:

(d) all of these

Question 23.

Which of the following antibiotics was extensively used to treat American soldiers wounded in World War 11 ?

- (a) Neomycin
- (b) Bacitracin
- (c) Chloramphenicol
- (d) Penicillin

Answer:

(d) Penicillin

Question 24.

Streptomycin is obtained from

- (a) Streptomyces griseus
- (b) S. cerevisiae
- (c) S. venezuelae
- (d) S. rimosus

Answer:

(a) Streptomyces griseus

Question 25.

Integrated Pest Management (IPM) discourages the excessive used of

- (a) biological methods
- (b) chemical pesticides
- (c) mechanical methods
- (d) all of these

Answer:

(b) chemical pesticides

Question 26.

Which of the following is not used as a biopesticide?

- (a) Trichoderma harzianum
- (b) Nucleopolyhedrovirus
- (c) Xanthomonas campestris
- (d) Bacillus thuringiensis

Answer:

(c) Xanthomonas campestris

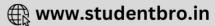
Question 27.

Organic farming does not include

- (a) green manures
- (b) chemical fertilisers







- (c) farmyard manures
- (d) compost

Answer:

(b) chemical fertilisers

Question 28.

Organic farming includes

- (a) use of fertilisers and pesticides of biological origin
- (b) IPM (Integrated Pest Management)
- (c) locally developed pest resistant varieties
- (d) all of these

Answer:

(d) all of these

Question 29.

Living organisms used to enrich the nutrient quality of the soil are called as

- (a) biocontrol agents
- (b) biofertilisers
- (c) synthetic fertilisers
- (d) natural fertilisers

Answer:

(d) natural fertilisers

Ouestion 30.

Biofertilisers are

- (a) some bacteria and cyanobacteria
- (b) fertilisers formed by ploughing in barseem
- (c) fertilisers obtained by decay of dead organisms
- (d) fertilisers prepared by mixing cattle dung with crop residues

Answer:

(a) some bacteria and cyanobacteria

Question 31.

Biofertilisers are the living organisms which

- (a) bring about soil nutrient enrichment
- (b) maximise the ecological benefits
- (c) minimise the environmental hazards
- (d) all of these

Answer:

(d) all of these

Question 32.

Which one of the following can be used as biofertiliser in cotton field?

- (a) Azolla-Anabaena
- (b) Streptococcus
- (c) Azospirillum
- (d) Azotobacter chroococcum

Answer:

(d) Azotobacter chroococcum





Question 33.

The symbiotic association between fungi and roots of higher plants is referred to as

- (a) lichen
- (b) mycorrhiza
- (c) biofertiliser
- (d) biocontrol agent

Answer:

(b) mycorrhiza

Question 34.

Cyanobacteria are

- (a) heterotrophs
- (b) chemotrophs
- (c) autotrophs
- (d) organotrophs

Answer:

(c) autotrophs

Question 35.

Enzyme which has the fibrinolytic effect is

- (a) protease
- (b) amylase
- (c) lipase
- (d) streptokinase

Answer:

(d) streptokinase

Question 36.

Statins used for lowering blood cholesterol level are extracted from

- (a) algae
- (b) bacteria
- (c) viruses
- (d) yeast

Answer:

(d) yeast

Question 37.

Monascus purpureus is a yeast commercially used in the production of

- (a) citric acid
- (b) ethanol
- (c) blood cholesterol lowering statins
- (d) streptokinase for removing clots from blood vessels

Answer

(c) blood cholesterol lowering statins

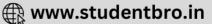
Question 38

is the first step of sewage treatment.

- (a) Precipitation
- (b) Chlorination
- (c) Sedimentation







(d) Aeration

Answer:

(c) Sedimentation

Question 39.

During the primary treatment of sewage, solid particles that settle down are called

- (a) floes
- (b) primary sludge
- (c) activated sludge
- (d) anaerobic sludge

Answer:

(b) primary sludge

Question 40.

The purpose of biological treatment of waste water is to

- (a) reduce BOD
- (b) increase BOD
- (c) reduce sedimentation
- (d) increase sedimentation

Answer:

(a) reduce BOD

Question 41.

The masses of bacteria held together by slime and fungal filaments to form mesh-like structures are called as

- (a) primary sludge
- (b) floes
- (c) activated sludge
- (d) anaerobic sludge

Answer:

(b) floes

Question 42.

BOD is.....in polluted water and in potable water.

- (a) more, less
- (b) less, more
- (c) less in both
- (d) medium in both

Answer:

(a) more, less

Ouestion 43.

In the sewage treatment, bacterial floes are allowed to sediment in a settling tank. This sediment is called as

- (a) inactivated sludge
- (b) activated sludge
- (c) primary sludge
- (d) secondary sluge

Answer:

(b) activated sludge







Question 44.

Which of the following steps is taken by the Ministry of Environment and Forests to protect rivers from water pollition ?

- (a) Ganga Action Plan
- (b) Narmada Action Plan
- (c) Yamuna Action Plan
- (d) Both (a) and (c)

Answer:

(d) Both (a) and (c)

Question 45.

Methanogens, growing anaerobically on cellulosic material produce

- (a) methane
- (b) methane and carbon dioxide
- (c) methane and hydrogen
- (d) methane, carbon dioxide and hydrogen

Answer:

(d) methane, carbon dioxide and hydrogen

Question 46.

Which of the following bacteria is present in the rumen of cattle?

- (a) Azotobacter
- (b) Rhizobium
- (c) Methanobacterium
- (d) Azospirillum

Answer:

(c) Methanobacterium

Question 47.

Process of biogas production is

- (a) aerobic process
- (b) anaerobic process
- (c) active process
- (d) passive process

Answer:

(b) anaerobic process

Question 48.

Biogas is produced by

- (a) aerobic breakdown of biomass
- (b) anaerobic breakdown of biomass
- (c) with the help of methanogenic bacteria
- (d) both (b) and (c)

Answer:

(d) both (b) and (c)

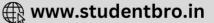
Question 49.

Dragonflies are used to get rid of

- (a) mosquitoes
- (b) aphids







- (c) butterfly caterpillars
- (d) both (a) and (b)

Answer:

(a) mosquitoes

Question 50.

A microbial biocontrol agent that can be used to control butterfly caterpillars is

- (a) Trichoderma polysporum
- (b) Bacillus thuringiensis
- (c) Streptococcus
- (d) mycorrhiza

Answer:

(b) Bacillus thuringiensis

Question 51.

Bacillus thuringiensis is used to control

- (a) bacterial pathogens
- (b) fungal pathogens
- (c) nematodes
- (d) insect pests

Answer:

(d) insect pests

Ouestion 52.

Bacillus thuringiensis (Bt) strains have been used for designing novel

- (a) biofertilisers
- (b) bio-metallurgical techniques
- (c) bio-mineralisation process
- (d) bio-insecticidal plants

Answer:

(d) bio-insecticidal plants

Question 53.

Trichoderma harzianum has proved to be a useful microorganism for

- (a) gene transfer in higher plants
- (b) biological control of soil-borne plant pathogens
- (c) bioremediation of contaminated soils
- (d) reclamation of wastelands

Answer:

(b) biological control of soil-borne plant pathogens

Question 54.

Baculoviruses (Nucleopolyhedrovirus) do not show

- (a) host specificity
- (b) narrow spectrum applications
- (c) effects on non-target pathogens
- (d) utility in IPM programme

Answer:

(c) effects on non-target pathogens





Question 55.

The residue left after methane production from cattle dung is

- (a) burnt
- (b) burried in land fills
- (c) used as manure
- (d) used in civil construction

Answer:

(c) used as manure

Question 56.

Methanogens do not produce

- (a) oxygen
- (b) methane
- (c) hydrogen sulphide
- (d) carbon dioxide

Answer:

(a) oxygen

Question 57.

Microbes are present in

- (a) soil
- (b) thermal vents
- (c) polluted water
- (d) all of these

Answer:

(d) all of these

