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) N_2 fixing bacteria
(b) N_2 fixing cyanobacteria
(c) mycorrhizae
(d) all of these
Answer:
(b) N_2 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 B_{12}
(d) vitamin E
Answer:
(c) vitamin B_{12}

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

Question 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) CO_2, C_2H_5OH and energy
(d) H_2O and CO_2
Answer:
(c) CO_2, C_2H_5OH 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

Question 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

Question 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

Question 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