



Microbes in Human Welfare Important Questions With Answers

NEET Biology 2023

1. Which of the following is non-symbiotic biofertiliser?

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

Solution : -

Free-living (non-symbiotic) bacteria like Azotobacter and Bacillus polymyxa fix atmospheric nitrogen and make it available to crop plants. VAM (Vasicular Arbuscular Mycorrhizae) is an endosymbiosis between fungi and roots of higher plants. Anabaena is a cyanobacterium (blue-green algae) which live solitary or in association with other plant and can fix atmospheric N_2 . Rhizobium bacterium makes symbiotic association with leguminous plants.

2. An example of endomycorrhiza is :

- a) Glomus** b) Agaricus c) Nostoc d) Rhizobium

Solution : -

Fungi are also known to form symbiotic associations with plants (mycorrhiza). Many members of the genus Glomus form mycorrhiza.

3. Nitrogen fixation in root nodules of Alnus is brought about by

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

Solution : -

Frankia, a nitrogen fixing mycelial bacterium (actinomycete), is associated symbiotically with root nodules of several non-legume plants like Alnus (Alder) Myrica, Rubus, etc.

4. First mycoherbicide of the world was obtained from

- a) Trichoderma Polysporism b) Phytophthora palmivora c) Cactoblastis cactorum **d) NPV**

5. Identify the blank spaces A, B, C and D in the table given below and select the correct answer.

Type of microbe	Scientific name	Product	Medical application
Fungus	A	Cyclosporin	AB
C	Monascus purpureus	Statin	D

A - Trichoderma polysporum,

A - Trichoderma polysporum,

B - As an immunosuppressive agent,

B - Lowering of blood cholesterol,

C - Yeast (Fungus),

C - Yeast (Fungus),

a) D - Lowering of blood cholesterol

b) D - As an immunosuppressive agent

A - Yeast (Fungus),

A - Streptococcus,

B - Lowering of blood cholesterol,

B - As an immunosuppressive agent,

C - Trichoderma polysporum,

C - Bacterium,

c) D - As an immunosuppressive agent d) D - Lowering of blood cholesterol

6. Biogases produced during sewage treatment are:

- a) H_2S , CH_4 , SO_2 b) H_2S , N_2 , CH_4 **c) CH_4 , H_2S , CO_2** d) CH_4 , O_2 , H_2S

Solution : -

Certain bacteria, which grow anaerobically on cellulosic material, produce large amount of methane along with CO₂ and H₂S.

7. In the following question, a statement of assertion is followed by a statement of reason. Mark the correct choice as :

Assertion: Rennet and fruit extract of *Withania somnifera* have antagonistic functions.

Reason: Rennet is obtained from calf's liver and is used for curdling of milk.

- a) If both assertion and reason are true and reason is the correct explanation of assertion.
- b) If both assertion and reason are true but reason is not the correct explanation of assertion.
- c) If assertion is true but reason is false. **d) If both assertion and reason are false.**

Solution : -

Rennet is obtained from calf's stomach and is a commercially available form of enzyme rennin. Rennet is used for curdling of milk to initiate the process of cheese formation. The same function can be carried out with the help of fruit extract of *Withania somnifera*. Thus, rennet and fruit extract of *Withania somnifera* have similar functions and are not antagonistic.

8. ___ is the first step of sewage treatment.

- a) Precipitation b) Chlorination **c) Sedimentation** d) Aeration

Solution : -

Primary treatment in sewage treatment involves physical removal of particles (large and small) from the sewage through filtration and sedimentation. Initially floating debris is removed by sequential filtration. Then the grit (soil and small pebbles) are removed by sedimentation.

9. A patient brought to a hospital with myocardial infraction is normally immediately given:

- a) Cyclosporin A b) Statins c) Penicillin **d) Streptokinase**

Solution : -

Streptokinase is used as a clot buster for removing clots from the blood vessels of patients who have undergone myocardial infarction

10. One of the major difficulties in the biological control of insect pests is the _____.

- a) practical difficulty of introducing the predator to specific areas
- b) method is less effective as compared with the use of insecticides
- c) predator does not always survive when transferred to a new environment
- d) the predator develops a preference to other diets and may itself become a pest**

Solution : -

The major difficulties in the biological control of insects pests is that the predator develops a preference to other diets and may itself become a pest. Biological control is mainly referred to the introduction of living organisms which destroy other harmful organisms.

11. Fill up the blanks by selecting the correct option.

(i) Biogas is a mixture of gases which predominantly contains _____ and is used as _____

(ii) Methanogens are commonly found in the _____ during sewage treatment.

(iii) _____ species are free-living fungi and effective biocontrol agents of several plant pathogens

- (i) methane, fuel, (i) CO₂, fuel, (i) methane, fuel, (i) methane, fuel,
- (ii) anaerobic sludge, (ii) primary sludge, (ii) anaerobic sludge, (ii) aerobic sludge,
- a) (iii) Trichoderma** b) (iii) Trichoderma c) (iii) Baculoviruses d) (iii) Trichoderma

12. Match column I with column II and select the correct answer from the given codes

Column I	Column II
A. Ganga action plan	(i) N ₂ fixing
B. Bt cotton	(ii) Ministry of environment and forests

Column I	Column II
C. Rhizobium	(iii) Insect resistant plant
D. Nostoc	(iv) N ₂ fixing bacterium

- a) **A-(ii), B-(iii), C-(iv), D-(i)** b) A-(iii), B-(ii), C-(iv), D-(i) c) A-(ii), B-(iv), C-(iii), D-(i)
d) A-(i), B-(iii), C-(ii), D-(iv)

13. Which of the following is pair of bio- fertilisers?

- a) **Azolla and BGA** b) Nostoc and legumes c) Rhizobium and grasses d) Salmonella and E. coli

Solution : -

Azolla and blue green algae - Anabaena fortn bioferliliser in rice fields.

14. Match the following list of microbes and their importance:

a. Sacharomyces 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(iii), b(i), c(iv), d(ii) **b) a(iii), b(iv), c(i), d(ii)** c) a(iv), b(iii), c(ii), d(i) d) a(iv), b(ii), c(i), d(iii)

15. Match the following list of bacteria and their commercially important products.

Bacterium	Product
(i) Aspergillus niger	(A) Lactic acid
(ii) Acetobacter aceti	(B) Butyric acid
(iii) Clostridium butylicum	(C) Acetic acid
(iv) Lactobacillus	(D) Citric acid

- a) i-(B), ii-(C), iii-(D), iv-(A) b) i-(B), ii-(D), iii-(C), iv-(A) **c) i-(D), ii-(C), iii-(B), iv-(A)**
d) i-(D), ii-(A), iii-(C), iv-(B)

16. Which of the following is responsible for yoghurt formation?

- a. Streptococcus thermophilus
b. Lactobacillus acidophilus
c. Lactobacillus bulgaricus
d. Streptococcus cremoris

- a) a, b, & c b) a, d & c **c) a & c** d) a & d

17. Select the correct option to fill up the blanks.

- (i) _____ are used in detergent formulations and are helpful in removing oily stains from the laundry.
(ii) _____ are ripened by growing Penicillium roqueforti on them.
(iii) _____ are produced without distillation whereas, _____ are produced by distillation of the fermented broth.
(iv) _____ antibiotic was used to treat American soldiers wounded in world war II.
(v) _____ is also called as kusht rog.

- a) (i) Lipases, (ii) Camembert cheese, (iii) Whisky and rum, wine and beer, (iv) Penicillin, (v) Leprosy

- b) (i) Lipases, (ii) Roquefort cheese, (iii) Wine and beer, whisky and rum, (iv) Penicillin, (v) Leprosy**

c)

- (i) Streptokinases, (ii) Roquefort cheese, (iii) Wine and beer, whisky and rum, (iv) Streptomycin, (v) Whooping cough

- d) (i) Amylases, (ii) Swiss cheese, (iii) Whisky and rum, wine and beer, (iv) Penicillin, (v) Diphtheria

18. Match column I with column II and select the correct answer from the given codes.

Column I	Column II
A. Methanogens	(i) BOD
B. Fermentors	(ii) Methane rich fuel gas
C. Organic waste in water	(iii) Production of methane
D. Biogas	(iv) Large vessels for growing microbes

- a) A - (ii), B - (i), C - (iv), D - (iii) **b) A - (iii), B - (iv), C - (i), D - (ii)** c) A - (ii), B - (iv), C - (iii), D - (i)
d) A - (iv), B - (iii), C - (ii), D - (i)

19. For retting of jute, the fermenting microbe used is _____.

- a) Methophilic bacteria **b) Butyric acid bacteria** c) Helicobacter pylori d) Streptococcus lactin

Solution : -

Retting is a stage in the manufacturing of vegetable fibres, especially the bast fibres. It is the process of submerging plant stems such as flax, jute, hemp or kenaf in water and soaking them for a period of time to loosen the fibers from the other components of the stem. Butyric acid bacteria, Clostridium butylicum causes the rotting of fibres.

20. Which one thing is not true about antibiotics?

- a) The term 'antibiotic' was coined by Selman Waksman in 1942.
b) first antibiotic was discovered by Alexander Flemming.
c) Each antibiotic is effective only against one particular kind of germ.
d) Some persons can be allergic to a particular antibiotic.

Solution : -

The statement (c) is wrong regarding to antibiotics because antibiotics are divided into two categories depending upon their effect

- (i) **Broad-spectrum antibiotics:** They have ability to act on several pathogenic species differing from each others in structure and composition of cell wall
(ii) **Specific antibiotics:** They act on a few similar type of pathogens.

21. BOD of wastewater is estimated by measuring the amount of

- a) total organic matter b) biodegradable organic matter **c) oxygen evolution d) oxygen consumption.**

Solution : -

Degree of impurity of water due to organic matter is measured in terms of BOD. It is the oxygen in milligrams required for five days in one litre of water at 20°C for the microorganisms to metabolise organic waste.

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

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

Solution : -

Cotton is a dicotyledonous crop. The best biofertiliser for cotton is Bacillus cereus and Azotobacter chroococcum. These are free living N₂ fixing bacteria and enhance the fertility of soil.

23. Which one of the following microorganisms forms symbiotic association with plants and helps them in their nutrition?

- a) Glomus** b) Azotobacter c) Klebsiella d) Azospirillum

Solution : -

Several fungi are known to form symbiotic associations with plants, i.e., mycorrhiza. The most common fungal partners of mycorrhiza are Glomus species.

24. Biological control component is central to advanced agricultural production. Which of the following is used as a third generation pesticide?

- a) Pathogens **b) pheromones** c) Insect repellents d) Insect hormone analogues

Solution : -

Insect hormones, i.e. pheromones, are third generation pesticides. Pheromones are the chemical. Substances which when released into an animal's surroundings, influence the behaviour or development of other individuals of the same species. Inorganic substances, oils, plant extracts used as insecticides are called first generation pesticides and synthetic organic compounds as second generation pesticides.

25. In the following question, a statement of assertion is followed by a statement of reason. Mark the correct choice as:

Assertion: Toddy becomes unpalatable after 24 hours.

Reason: The fermentation of toddy is continued by naturally occurring yeasts.

- a) If both assertion and reason are true and reason is the correct explanation of assertion.
 b) If both assertion and reason are true but reason is not the correct explanation of assertion.
 c) If assertion is true but reason is false. d) If both assertion and reason are false.

Solution : -

Toddy is a traditional drink of some parts of South India which is made by fermentation of sap of palms. Toddy left for few hours undergoes fermentation with the help of naturally occurring yeast to form beverage containing about 6 % alcohol. But after about 24 hours toddy becomes unpalatable because fermentation is carried on. Now, it can be used for production of vinegar.

26. Match column I with column II and select the correct option from the codes given below.

Column I	Column II
A. Statins	(i) Biogas
B. Dung	(ii) <i>Saccharomyces cerevisiae</i>
C. Ethanol production	(iii) <i>Monascus purpureus</i>
D. Cydosporin A	(iv) <i>Trichoderma polysporum</i>

- a) A-(iii), B-(i), C-(iv), D-(ii) b) A-(i), B-(iii), C-(iv), D-(ii) c) A-(iii), B-(ii), C-(iv), D-(i)
d) A-(iii), B-(i), C-(ii), D-(iv)

27. Methanogens do not produce

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

Solution : -

Biogas is a methane rich fuel gas produced by anaerobic breakdown or digestion of biomass with the help of methanogenic bacteria. Biogas is made up of methane (50-70%), carbon dioxide (30-40%) with traces of nitrogen, hydrogen sulphide and hydrogen. The effluent and residue left after the fermentative generation of biogas is rich in minerals, lignin and a part of cellulose. It is an ideal manure.

28. 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

Solution : -

Biofertilisers are microorganisms which bring about nutrient enrichment of soil by enhancing the availability of nutrients to crops. Microorganisms which act as biofertilisers are bacteria, cyanobacteria (blue green algae) and mycorrhizal fungi. Bacteria and cyanobacteria have the property of nitrogen fixation while mycorrhizal fungi preferentially withdraw minerals from organic matter for the plant with which they are associated. They maximise ecological benefits and minimise environmental hazards.

29. An organism used as a biofertiliser for raising soyabean crops is _____.

- a) *Azotobacter* b) *Azospirillum* **c) *Rhizobium*** d) *Nostoc*

Solution : -

Rhizobium is used as biofertiliser for raising soybean crop. *Rhizobium* leaves in symbiotic relationship with legume plant. It is found in root nodules of legume plants. In *Rhizobium* 'nif gene' is present which is nitrogen fixing gene.

30. In the following question, a statement of assertion is followed by a statement of reason. Mark the correct choice as:

Assertion: Nitrogenase enzyme gets inactivated in presence of oxygen yet N_2 fixation occurs in aerobic cells of legume nodules.

Reason: Leghaemoglobin allows presence of oxygen just sufficient for cellular respiration only.

- a) **If both assertion and reason are true and reason is the correct explanation of assertion**
b) If both assertion and reason are true but reason is not the correct explanation of assertion
c) If assertion is true but reason is false. d) If both assertion and reason are false

Solution : -

Nitrogenase enzyme is the enzyme responsible for nitrogen fixation in leguminous plants inside nodules infected by Rhizobia. This enzyme undergoes irreversible damage in presence of oxygen and N_2 fixation is stopped but the eukaryotic cells of nodules respire aerobically thus, oxygen is needed. Proper balance of oxygen amount is maintained by oxygen scavenger protein called leghaemoglobin which maintains oxygen level just sufficient for cellular respiration so the cells do not die and it removes extra oxygen to produce anaerobic atmosphere for proper functioning of nitrogenase enzyme.

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

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

Solution : -

BOD (biochemical oxygen demand) refers to the amount of the oxygen that would be consumed if all the organic matter in one litre of water were oxidised by bacteria. The BOD test measures the rate of uptake of oxygen by microorganisms in a sample of water and thus, indirectly BOD is the measure of the organic matter present in the water. The greater the BOD of wastewater, more is its polluting potential.

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

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

Solution : -

Methanobacterium is found in the rumen (a part of the stomach) of cattle. A lot of cellulosic material is also available in the rumen. In rumen, these bacteria help in the breakdown of cellulose and play an important role in nutrition of cattle.

33. Which one of the following is an example of carrying out biological control of pests/ diseases using microbes?

- a) Trichodenna sp. against certain plant pathogens b) Nucleopolyhedrovirus against white rust in Brassica
c) Bt - cotton to increase cotton yield d) Ladybird beetle against aphids in mustard

Solution : -

Bt cotton which is genetically modified cotton plant which is prepared by incorporation of gene extracted from bacillus thuringiensis. This gene produces toxin protein in inactive form which harms only to limited insects not all. Its target insects are the larvae of lepidopterans, moths, butterflies, beetles, flies etc. but makes no harm to other life forms. So, it is used as biological control of pests/disease.

34. Which of the following food items is produced by the fermenting activity of microbes?

- A. Idli
B. Dosa
C. Toddy
D. Cheese
a) A and C b) C and D c) A, B and C **d) A, B, C and D**

Solution : -

Cheese is one of the oldest milk products prepared with the help of microbes. The curd is separated from liquid part or whey to form cheese. Dosa, Upma and Idli are fermented preparation of rice and black gram. The two are allowed to ferment for 3-12 hours with air borne *Leuconostoc* and *Streptococcus* species of bacteria. Toddy is a traditional drink of some parts of South India which is made by fermentation of sap of palms.

35. In the following question, a statement of assertion is followed by a statement of reason. Mark the correct choice as :

Assertion: Energy value of biogas is lower than that of organic matter.

Reason: Biogas minimises the chances of spread of fecal pathogens

a) If both assertion and reason are true and reason is the correct explanation of assertion

b) If both assertion and reason are true but reason is not the correct explanation of assertion.

c) If assertion is true but reason is false. d) If both assertion and reason are false

36. Study the following statements and select the incorrect ones

(i) Physical removal of large and small particles through filtration and sedimentation is called primary sewage treatment.

(ii) Secondary sewage treatment is mainly a mechanical process.

(iii) Activated sludge sediment in a sewage treatment plant is a rich source of aerobic bacteria.

(iv) Biogas, commonly called as gobar gas, is pure methane.

a) (i) and (ii) b) (ii) and (iv) c) (ii) and (iii) d) (iii) and (iv)

Solution : -

Secondary treatment is also called biological treatment or microbial degradation. It is mainly a biological process. Biogas is a mixture of gases, containing predominantly methane (50 - 70%), CO₂ (30 - 40%) and traces of hydrogen, H₂S and nitrogen.

37. The primary treatment of wastewater involves the removal of

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

Solution : -

Primary or physical treatment is the process of removal of small and large, floating and suspended solids from sewage through two processes of filtration and sedimentation. First floating and suspended matter is removed through sequential filtration with progressively smaller pore filters. The filtrate is then kept in large open settling tanks where grit (sand, silt, small pebbles) settles down. Aluminium or iron sulphate is added in certain places for flocculation and settling down of solids. The sediment is called primary sludge while the supernatant is called effluent.

38. In a microbiology laboratory, the technician uses heat to sterilise the nutrient solution that is used to grow a fungus. When the heating system broke down, he sterilised the solution by passing it (in a sterile environment) through a sterile filter with a pore size of 0.2 micrometers. When the fungus was grown on the filtered nutrient solution, it stopped growing and looked unhealthy within a few days, Which statements is the most likely explanation for the observed effects on the fungus?

a) The nutrient solution contained a virus

b) Heating makes the glucose in the nutrient solution more digestible

c) Filtering removed one of the larger nutrient molecules

d) The nutrient solution contained a bacterium that was pathogenic to the fungus.

Solution : -

The nutrient solution could have contained a virus which passed easily through the sterile filter of pore size of 0.2 micrometer. This caused retarded and unhealthy growth of the fungus.

39. Which one of the following pairs is not correctly matched?

- a) Streptomyces - Antibiotic **b) Serratia - Drug addiction** c) Spirulina - Single cell protein
d) Rhizobium - Biofertiliser

Solution : -

Streptomyces is a source for streptomycin while Spirulina is a rich source of vitamin B, and proteins and Rhizobium is a symbiotic nitrogen fixing bacteria.

40. Identify the blank spaces A, B, C and D in the following table and select the correct answer.

Type of microbe	Scientific name	Commercial product
Bacterium	A	Lactic acid
Fungus	B	Cyclosporin A
C	Monascus purpureus	Statins
Fungus	Penicillium notatum	D

A - Lactobacillus

B - Trichoderma polysporum

C - Yeast

a) D - Penicillin

A - Lactobacillus

B - Trichoderma polysporum

C - Agaricus

d) D - Penicillin

A - Acetobacter

B - Trichoderma polysporum

C - Yeast

b) D - Streptomycin

A - Lactobacillus

B - Aspergillus niger

C - Algae

c) D - Penicillin

41. What is agent orange?

- a) A biodegradable insecticide **b) A weedicide containing dioxin** c) Colour used in fluorescent lamp
d) A hazardous chemical used in luminous paints

Solution : -

Agent orange is a weedicide containing dioxin. it is so, called because of distinctive orange stripe on its packaging, combines equal parts of 2, 4-D and 2, 4, 5-T was later found to contain a highly poisonous chemical dioxin as impurity.

42. Biochemical oxygen demand (BOD) in a river water

- a) has no relationship with concentration of oxygen in the water
b) gives a measure of Salmonella in the water **c) increases when sewage gets mixed with river water**
d) remains unchanged when algal bloom occurs.

43. Unicellular symbiotic organisms improve yield of legumes by

- a) fixing atmospheric nitrogen without colonising roots of host plant
b) fixing atmospheric nitrogen and colonising roots of host plant
c) inducing the host plant to absorb more phosphorus
d) stimulating the host plant to become tolerant to drought

Solution : -

Symbiotic nitrogen fixing bacteria form a mutually beneficial association with the plants. The bacteria obtain food and shelter from plants. In return, they give a part of their fixed nitrogen to the plants. The most important of the symbiotic nitrogen fixing bacteria is *Rhizobium*. It forms nodule on the roots of legume plants. They develop the ability to fix nitrogen only when they are present inside the root nodules. In the nodule cells, bacteria (bacteroids) lie in groups surrounded by membrane of the host which is lined by a pink-red pigment called leghaemoglobin.

44. Identify the blank spaces A, B, C and D in the following table and select the correct answer.

Type of microbe	Scientific name	Commercial product
Bacterium	A	Streptokinase
B	Aspergillus niger	Citric acid

Type of microbe	Scientific name	Commercial product
Fungus	Trichoderma polysporum	C
Bacterium	D	Butyric acid

A - Streptococcus

A - Clostridium butylicum

A - Streptococcus

B - Fungus

B - Streptococcus

B - Yeast

C - Cyclosporin A

C - Fungus

C - Cyclosporin A

a) D - Clostridium butylicum

b) D - Cyclosporin A

c) D - Lactobacillus

A - Streptococcus

B - Cyclosporin A

C - Statins

d) D - Clostridium butylicum

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

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

Solution : -

Wine and beer are produced without distillation whereas whisky, brandy and rum are produced by distillation of the fermented broth.

46. Study the following statements regarding lactic acid bacteria (LAB) which are used to convert milk into curd

(i) They produce acids that coagulate and partially digest the milk proteins.

(ii) A small amount of curd added to the fresh milk as an inoculum contains millions of LAB, which at suitable temperature, multiply and convert milk into curd.

(iii) Conversion of milk into curd improves its nutritional quality by increasing vitamin B₁₂.

(iv) LAB may result in acidity in the stomach of human beings.

Which of the given statements are correct?

a) (i) and (ii) b) (ii) and (iii) **c) (i), (ii) and (iii)** d) (i), (ii), (iii) and (iv)

Solution : -

Microbes such as Lactobacillus and others commonly called lactic acid bacteria (LAB) grow in milk and convert it into curd. During growth, such bacteria produce acids (mainly lactic acid) that coagulate and partially digest the milk proteins. A small amount of curd, known as starter, is added to the milk and kept at suitable temperature, where lactic acid bacteria multiply in millions and converts milk into curd that also improves its nutritional quality by increasing vitamin B₁₂. It also check growth of disease causing microbes in the stomach.

47. Dosa and idli are fermented preparation of rice and Black Gram. The Fermentation is done with

a) Leuconostoc b) Streptococcus c) Saccharomyces **d) More than one option are correct**

48. Which one of the following pairs is wrongly matched?

a) Alcohol - nitrogenase b) Fruit juice - Pectinase c) Textile - amylase d) Detergents - lipase

Solution : -

Alcohol - Nitrogenase. This is wrongly matched. Alcohol (Ethyl alcohol) is produced by fermentation of any carbohydrate. The fermentation occurs in following steps - Starch - Glucose - Pyruvate - Aldehyde - Ethanol. This occurs in the presence of various enzymes and yeast.

49. 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

50. The reason that the chemical/synthetic fertilisers should be replaced by biofertilisers is that the former

a) are source of environmental pollution b) are expensive

c) exhaust the valuable energy resources for their manufacture **d) all of these**

Solution : -

Chemical fertilisers are being used in increasing amounts in order to increase output in high yielding varieties of crop plants. However, chemical fertilisers cause pollution of water bodies as well as ground water, besides getting stored in crop plants. They are expensive and also require lot of energy resources in their manufacture.

