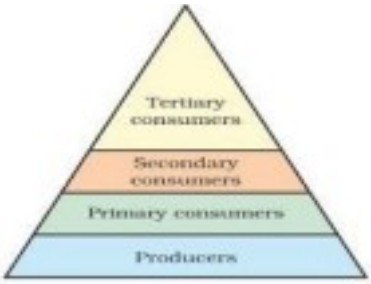
Q10. Depict trophic levels diagrammatically.



Q11. Why food chains generally consist of three or four trophic levels?

A11. According to 10% energy law, only 10% of energy is available for use by next trophic level loss of energy is so great 90% at each step that, very little usable energy remains after 4th trophic level.

Q12. Flow of energy is unidirectional justify

A12. The energy that is captured by autotrophs does not revert back to the solar input . The energy that passes to the herbivores does not come back to autotrophs .Once the energy is passed to the next trophic level it's no longer available to the previous level.

A 13.Which phenomenon is responsible for presence of toxic chemicals like pesticides in grains fruits meat etc.

A13.Toxic chemicals are washed down into soil or water bodies which are absorbed by plants with water and minerals from the soil . As these chemicals are non biodegradable they get accumulated progressively at each trophic level this phenomena is called as biomagnification. Organisms occupying last trophic level in any food chain will show maximum biomagnification while the plants i.e autotrophs at the first trophic level show the least biomagnification.

Q14. Which methods could be applied to reduce our intake of pesticides?

A14.Organic farming in which plant based bio pesticides are used without any use of harmful synthetic chemicals, can help reduce our intake of pesticides.

Q15. What is the role of decomposers?

A15. Decomposers like fungi and protozoa break down dead remains of plants and animals and their waste into simple inorganic substances, thereby releasing this back into soil or water for being used by the producers .Thus decomposers help in nutrient cycling and provide space for new life to settle.

Q16. What is ozone, how is it formed?

A16. Ozone is a triatomic molecule of oxygen in higher atmosphere oxygen molecule is split into two oxygen atoms by the action of UV rays. These oxygen atoms when combined with molecular oxygen it forms ozone

UV rays

O_2 O + O

O_2 +O. O_3

Q17.What was the cause of sharp decline in the amount of ozone in the atmosphere?
A17. Synthetic chemicals like **chlorofluorocarbons CFC's** is used as refrigerant and in fire extinguishers are responsible for ozone depletion.

Q18.What is UNEP, and its role in preventing ozone depletion?

A18. UNEP -United Nations environment programme .In 1987 UNEP succeeded in forging and agreement to freeze CFC production at 1986 levels.

Q19 . Why ozone depletion is a cause of concern?