


Chapter: 16

Man and his Environment

Objective

1. An example of carnivore plants is:
☒ (A) Pitcher plant ☐ (B) Ferns ☐ (C) Rose plant ☐ (D) Mosses
2. The biggest decomposer of biosphere are:
☐ (A) Virus ☒ (B) Bacteria and fungi ☐ (C) Bacteria ☐ (D) Fungi
3. A group of organisms of the same species living in a particular area is called:
☐ (A) Abiotic factor ☒ (B) Population ☐ (C) Ecology ☐ (D) Community
4. It is an example of secondary consumers:
☒ (A) Wolf ☐ (B) Tiger ☐ (C) Cattle ☐ (D) Lion
5. Which is not biotic factor?
☐ (A) Animals ☐ (B) Plants ☐ (C) Bacteria ☒ (D) Soil
6. It is the example of tertiary consumers:
☐ (A) frog ☐ (B) cattle ☒ (C) lion ☐ (D) Snake
7. The study of the relation between living organisms and their environment is:
☐ (A) morphology ☐ (B) histology ☐ (C) biology ☒ (D) ecology
8. The thickness of biosphere is about:
☐ (A) 40 km ☐ (B) 30 km ☒ (C) 20 km ☐ (D) 10 km
9. Which animal is a primary consumer?
☐ (A) fox ☒ (B) grasshopper ☐ (C) frog ☐ (D) lion
10. To fulfill their nitrogen requirements carnivorous plants eat:
☐ (A) Worms ☐ (B) Fungus ☐ (C) Insects ☒ (D) Bacteria
11. The United Nations established Intergovernmental Panel on climate change in:
☒ (A) 1990 ☐ (B) 2022 ☐ (C) 2021 ☐ (D) 2020
12. Which one ecologist developed the concept of ecological pyramids?
☐ (A) Darwin ☒ (B) Lamarck ☐ (C) Charles Elton ☐ (D) Mendel
13. Which one is the reservoir of free gaseous nitrogen:
☐ (A) Water ☐ (B) Consumers ☒ (C) Atmosphere ☐ (D) Producers
14. Which one is main producer in aquatic ecosystem:
☐ (A) Bacteria ☐ (B) Fungi ☐ (C) Protozoans ☒ (D) Phytoplankton
15. The current level of urbanization in Pakistan is about:
☒ (A) 52 % ☐ (B) 42 % ☐ (C) 32% ☐ (D) 22%
16. Which of the following is the abiotic component of the ecosystem?
☐ (A) Carnivores ☒ (B) Oxygen ☐ (C) Herbivores ☐ (D) Producers
17. When we eat onions, our trophic level is:
☒ (A) Primary consumer ☐ (B) Producer
☐ (C) Secondary consumer ☐ (D) Decomposer

18. In the food chain "grass → rabbit → fox → bear → mushroom", how many types of decomposers are present?
(A) 3 (B) 2 (C) 1 (D) 4
19. Organisms in the ecosystem that are responsible for the recycling of plant and animal wastes are:
(A) Competitors (B) Producers (C) Consumers (D) Decomposers
20. Which form of Nitrogen is taken by the producers of the ecosystem?
(A) Nitrites (B) Nitrogen gas (C) Ammonia (D) Nitrates
21. R-2 means:
(A) Recycle (B) Reduce (C) Reuse (D) Renewable
22. Which Plant is not a Carnivores:
(A) Sundew (B) Cactus (C) Venus Flytrap (D) Pitcher Plant
23. Materials can be recycled:
(A) Paper, Glass, Plastic (B) Paper (C) Glass (D) Plastic
24. Large mammals that feed on honey:
(A) Elephant (B) Badger (C) Phenotype (D) Genotype
25. Which type of symbiosis relationship is there in termite and protozoan? 
(A) predation (B) parasitism (C) mutualism (D) commensalism
26. All carnivore animals are:
(A) Predator (B) Pathogen (C) Host (D) Parasite
27. Abiotic component of an ecosystem is:
(A) Consumer (B) Decomposer (C) Light/water/ soil (D) Producer
28. Biotic component of an ecosystem is:
(A) Air (B) Water (C) Light (D) Plant/producers
29. The primary / basic source of energy for all Ecosystems is the:
(A) Environment (B) Stars (C) Moon (D) Sun
30. The basic Trophic Level of all food chains is:
(A) Consumers (B) Reducers (C) Producers (D) Decomposers
31. Charles Elton developed the concept of ecological pyramid in:
(A) 1926 (B) 1927 (C) 1925 (D) 1924
32. Conversion of nitrates into nitrogen gas is called:
(A) Denitrification (B) Ammonification (C) Nitrogen fixation (D) Assimilation
33. More than normal denitrification change the richness of soil as:
(A) Finished (B) less (C) Increase (D) Bad
34. Formation of nitrites and nitrates from Ammonia is called:
(A) Ammonification (B) Assimilation (C) Nitrification (D) Denitrification
35. To convert nitrogen gas into nitrate is called:
(A) Ammonification (B) Assimilation (C) Denitrification (D) Nitrogen fixation
36. It is perfect cycle in the sense that is returned to atmosphere as soon as it is removed:

- (A) oxygen cycle (B) water cycle (C) nitrogen cycle (D) carbon cycle
37. Example of Endoparasites is:
(A) Leech (B) Lices (C) plasmodium / ascaris (D) Mosquito
38. Example of ectoparasite is:
(A) Ascaris (B) Mosquito / lice (C) bacteria (D) virus
39. The type of symbiotic association in which one partner gets benefits while other is not benefited nor harmed is called:
(A) Commensalism (B) predation (C) Mutualism (D) Parasitism
40. It is a consumer:
(A) Grass (B) Rabbit (C) Phytoplankton (D) Alga
41. Type of symbiosis in which both partners are benefited and neither is harmed is called:
(A) parasitism (B) commensalism (C) mutualism (D) symbiosis
42. 250 years ago, the population of world was approximately millions.
(A) 400 (B) 500 (C) 700 (D) 600
43. pH of acid rain is:
(A) 2-3 (B) 3 -4 (C) 3 -5 (D) 3-6
44. Dengue fever is a /an infection.
(A) algal (B) fungal (C) viral (D) bacterial
45. Dengue virus attacks on:
(A) red cells (B) white cells (C) brain (D) platlets
46. A recovery of one tone of paper can save how many tresses?
(A) 17 (B) 10000 (C) 170 (D) 200
47. The interaction between the members of the sane species is called:
(A) Mutualism (B) Intra specific (C) Interspecific (D) None of these
48. Biosphere surrounding the Earth is about:
(A) 18 km (B) 19 km (C) 20 km (D) 17 km
49. R-3 means:
(A) Refuse (B) Less use (C) Reuse (D) Recycle
50. The total amount of living matter in an ecosystem at any time is called:
(A) Food web (B) Food chain (C) Energy (D) Biomass
51. Mosquitoes, lice and leaches are examples of:
(A) Endoparasite (B) Obligate parasite (C) Both A & B (D) Ectoparasite
52. Non-renewable resources are:
(A) Soil (B) Water (C) Fossil fuels (D) Wind
53. All ecosystems of the world together form:
(A) habitat (B) biosphere (C) community (D) population
54. Since 1800 A.D, the amount of CO₂ increased in atmosphere is:
(A) 50% (B) 40% (C) 30% (D) 20%

55. The smallest unit in ecological organization is:

- ☒ (A) species ☐ (B) ecosystem ☐ (C) population ☐ (D) community

56. The enrichment of nitrates and phosphates in water is called:

- ☐ (A) nitrification ☐ (B) decomposition ☐ (C) pollution ☒ (D) Eutrophication

57. In 1927 an English Ecologist developed the concept of Ecological pyramids:

- ☐ (A) Darwin ☐ (B) Lamark ☒ (C) Charles Elton ☐ (D) Mendel

58. break down complex organic compound.

- ☐ (A) Consumers ☒ (B) Decomposers ☐ (C) Producers ☐ (D) All of these

59. Which product is formed during industrial nitrogen fixation?

- ☒ (A) Ammonia ☐ (B) Carbon dioxide ☐ (C) Urea ☐ (D) Nitrite

60. All Ecosystem of the world together form the:

- ☐ (A) Habitate ☐ (B) Community ☐ (C) Population ☒ (D) Biosphere

61. Which form of nitrogen is taken by the producers of the ecosystem?

- ☐ (A) Ammonia ☐ (B) Nitrogen gas ☒ (C) Nitrates ☐ (D) Nitrites

62. The consumers that eat animal flesh as well as plants and plant products are called:

- ☐ (A) Producers ☒ (B) Omnivores ☐ (C) Carnivores ☐ (D) Herbivores

63. Which is the product of industrial nitrogen fixation?

- ☒ (A) Ammonia ☐ (B) Carbon dioxide ☐ (C) Oxygen ☐ (D) Urea

64. Which one is the abiotic component of the ecosystem?

- ☐ (A) Carnivores ☒ (B) Air ☐ (C) Herbivores ☐ (D) Producers

65. is the example of tertiary consumer.

- ☐ (A) snails ☐ (B) sparrows ☒ (C) hawk ☐ (D) leaves

66. Which animal is an Herbivore?

- ☐ (A) Fox ☐ (B) Owl ☐ (C) Frog ☒ (D) Grasshopper

67. Animals cannot take Nitrogenous compound from:

- ☐ (A) Fungi ☐ (B) Plants ☐ (C) animals ☒ (D) Virus

68. Which carnivores are called top carnivores:

- ☐ (A) Producers ☒ (B) Tertiary carnivores
☐ (C) Secondary carnivores ☐ (D) Primary carnivores

69. The abiotic component of an ecosystem is:

- ☐ (A) Producer ☐ (B) Herbivore ☒ (C) Soil ☐ (D) Decomposer

70. When we eat Goat Meat, our Trophic Level is:

- ☐ (A) Decomposer ☒ (B) Primary Consumer
☐ (C) Secondary Carnivore ☐ (D) Primary Carnivore

71. The level of Urbanization in Pakistan was aboutas per report of World Bank during 1998 :

- ☐ (A) 37 % ☒ (B) 32 % ☐ (C) 40 % ☐ (D) 27 %

72. The term R-4 means:

- ☒ (A) Reforest ☐ (B) Recycle ☐ (C) Ruse ☐ (D) Reduce

73. There are types of dengue virus.

- ☐ (A) 5 ☒ (B) 4 ☐ (C) 3 ☐ (D) 2

74. Dengue fever is an infection.

- ☐ (A) Fungal ☐ (B) Algal ☒ (C) Viral ☐ (D) Bacterial

75. The relationship between sucker fish and shark is:

- ☐ (A) Predation ☐ (B) Parasitism ☐ (C) Mutualism ☒ (D) Commensalism

76. How many spermatids are produced from each primary spermatocyte?

- ☐ (A) 8 ☐ (B) 6 ☐ (C) 2 ☒ (D) 4

77. There is for utilization of resources among organism of ecosystem?

- ☐ (A) Ammonification ☐ (B) Pollution ☒ (C) Competition ☐ (D) Population

78. Which one of the following plant is parasite?

- ☐ (A) Venus flytrap ☒ (B) Cuscuta ☐ (C) Sundew ☐ (D) Pitcher plant

79. Lion is:

- ☒ (A) Carnivore ☐ (B) Omnivore ☐ (C) Decomposer ☐ (D) Herbivore

80. Rabbit is:

- ☐ (A) Carnivore ☒ (B) Herbivore ☐ (C) Producer ☐ (D) Secondary consumer

81. How many types of ecological pyramids are?

- ☐ (A) 5 ☐ (B) 8 ☒ (C) 3 ☐ (D) 7

82. The base of food chain is always formed by:

- ☐ (A) Food web ☒ (B) Plant (producer) ☐ (C) Ecosystem ☐ (D) Animal

83. A network of food chains which are interconnected at various trophic levels is called:

- ☒ (A) food web ☐ (B) biomass
☐ (C) pyramid of numbers ☐ (D) pyramid of biomass

84. Smog forms a yellowish brown haze and hamper visibility during:

- ☐ (A) spring ☐ (B) autumn ☒ (C) winter ☐ (D) summer

85. Maldives might become Uninhabitable:

- ☐ (A) within 1000 years ☐ (B) within 500 years ☐ (C) within 10 years ☒ (D) within 100 years

86. When Rabbit eats mustard plant, its trophic level will be:

- ☐ (A) secondary consumers ☐ (B) primary carnivores
☒ (C) primary consumers ☐ (D) primary producers

Chapter : 16

Man and his Environment



★ Subjective ★

Q1: Define ecosystem.

Ans: Ecosystem:

The self-sufficient unit of an environment that is formed as a result of interaction between its biotic and a biotic component is called ecosystem.

Q2: Define ecology.

Ans: Ecology:

The study of the interrelationship between organism and their environment is called ecology.

Q3: Differentiate between population and community.

Ans: Difference between population and community is:

Population	Community
A group of organisms of the same species inhabiting a specific geographical area at particular time is called population.	All the populations that live in a habitat and interact in various ways with one another are collectively called community.

Q4: Define species.

Ans: A species is a group of organisms which can interbreed freely in nature to produce fertile offspring.

Q5: Differentiate between Ecosystem and Biosphere.

Ans: Difference between Ecosystem and Biosphere is:

Ecosystem	Biosphere
<ul style="list-style-type: none"> ➤ The self-sufficient unit of environment that is formed as a result of interaction between its biotic community and abiotic components is known as ecosystem. ➤ Example: A pond, a lake, and a forest. 	<ul style="list-style-type: none"> ➤ All ecosystems of the world together form the biosphere. ➤ Example: Biosphere ranges from floor of ocean to the top of highest

Q6: What is meant by decomposers? Give example.

Ans: Decomposers:

Decomposers or reducers breakdown the complex organic compounds of dead matter into simple compound.

For example:

- Bacteria
- Fungi

Q7: Differentiate between carnivores and herbivores.

Ans: Difference between carnivores and herbivores is:

Carnivores	Herbivores
<ul style="list-style-type: none"> ➤ Carnivores are animals and plants that only consume meat. ➤ Example: Lion, tiger etc. 	<ul style="list-style-type: none"> ➤ Herbivores: Are living organisms that feed on plants. ➤ Example: Cattle, deer, rabbit etc.

Q8: What are omnivores?

Ans: Omnivores:

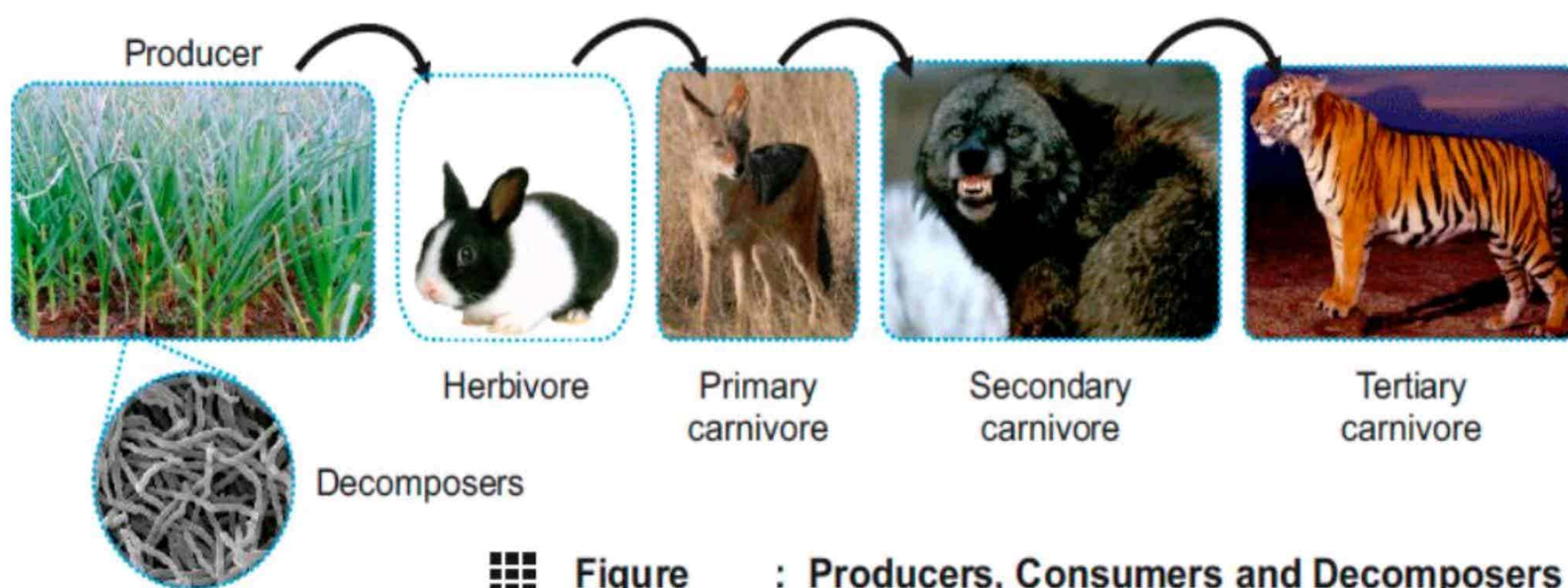
Omnivores are the consumers that eat animal flesh as well as plants and plant products.

Q9: What are carnivore's plants? Give two examples.

Ans: Carnivores feed on other animals. Primary carnivores feed on herbivores. Fox, frog, snakes etc. are primary carnivores. Secondary carnivores feed on primary carnivore's wolf and owl

etc. is secondary carnivores. Tertiary carnivores e.g. lion, tiger etc. feed on secondary carnivores.

This diagram is just for information.



Q10: What is the role of reducers in an ecosystem?

Ans: Decomposers or reducers breakdown the complex organic compound of dead matter into simple compound. They secrete digestive enzymes into dead and decaying plants and animals to digest the organic material.

Q11: What is difference between producers and consumers?

Ans: Difference between producers and consumers is:

Producers	Consumers
Producers are autotrophs present in an ecosystem. These include plants, algae and photosynthetic bacteria. These organisms are able to synthesize complex organic compound from inorganic materials.	These are heterotrophs. They cannot synthesize their food, so depend upon producers for food. These includes fungi, animals etc.

Q12: Difference between primary and secondary consumers.

Ans: Difference between primary and secondary consumers is:

Primary consumers	Secondary consumers
Herbivores e.g. cattle, deer, rabbit etc. feed on plants. They are the primary Consumers.	Carnivores feed on other animals. Primary carnivores (secondary consumers) feed on herbivores. Fox, frog, snake etc. are primary carnivores.

Q13: How energy flows in an ecosystem?

Ans: In an ecosystem, energy flow from one trophic level to the next. The flow of energy is different in different trophic level of ecosystem.

Q14: Write the names of abiotic and biotic components of ecosystem.

Ans: Abiotic components:

The abiotic components include the non-living factors present in ecosystem. The important non-living factors are light, air, water, soil and the basic elements and compound.

Biotic components:

The biotic components comprise the living part organisms) of the ecosystem.

Biotic components are further classified as, producers consumers and decomposers.

Q15: Why tertiary carnivores are called top carnivores?

Ans: Tertiary carnivores are not eaten by any other animals. They are also called top carnivores.

Q16: If producers are eliminated from ecosystem; what will happen?

Ans: The producers are the autotrophs present in an ecosystem. These organisms are able to synthesize complex organic compound (food) from inorganic raw materials. Producers form the basis of an ecosystem. If producers are eliminated from ecosystem the balance of ecosystem will be disturbed and ecosystem can be destroyed.

Q17: **What is meant by Trophic Level?**

Ans: Trophic (food) level is the level at which an organism feeds in food chain. The first trophic level is made of producers, the second of primary consumers and so on.

This diagram is just for information.

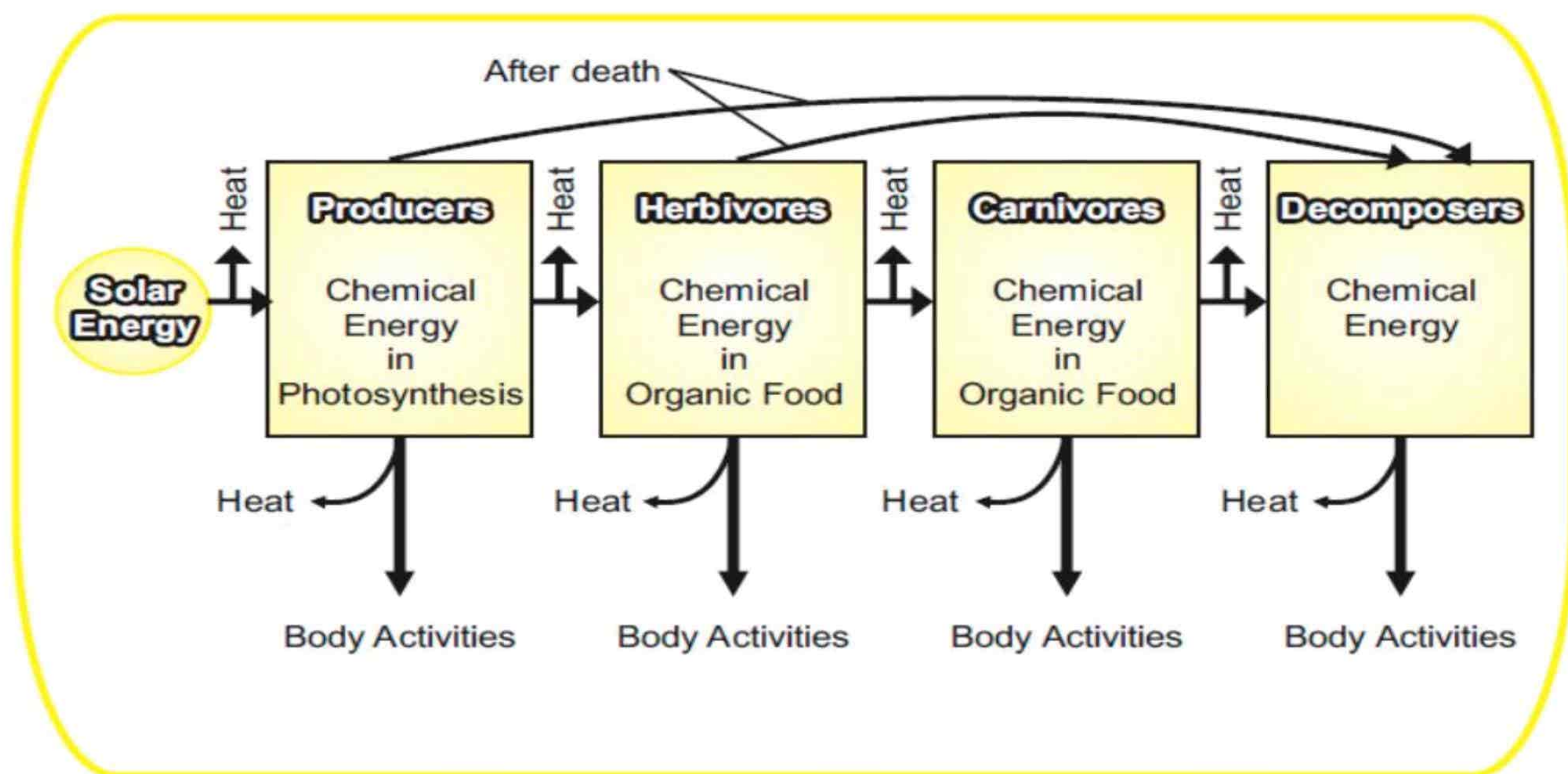



Figure : Energy flow in an ecosystem

Q18: **How storage and expenditure of energy occur in ecosystem?**

Ans: The storage and expenditure of energy in an ecosystem is in accordance with the basic law of thermodynamics. i.e energy can neither be created nor destroyed but can be transformed from one form into another.

Q19: **Differentiate between food chain and food web.**

Ans: Difference between food chain and food web is:

Food chain	Food web 
Food chain is a series of organisms within an ecosystem in which each organism feeds on the one before it and fed by the one after it.	Food web is a network of food chains which are interconnected at various trophic levels.

Q20: **Write down the importance of food chain.**

Ans: Materials flow from one trophic level to next by means of food chains and food web.

Q21: **Draw a simple food chain.**

Ans: A simple food chain:

Grass → Grasshopper → Sparrow → Hawk

Q22: **Draw a food web of grassland ecosystem.**

Ans: A food web of grassland ecosystem is:

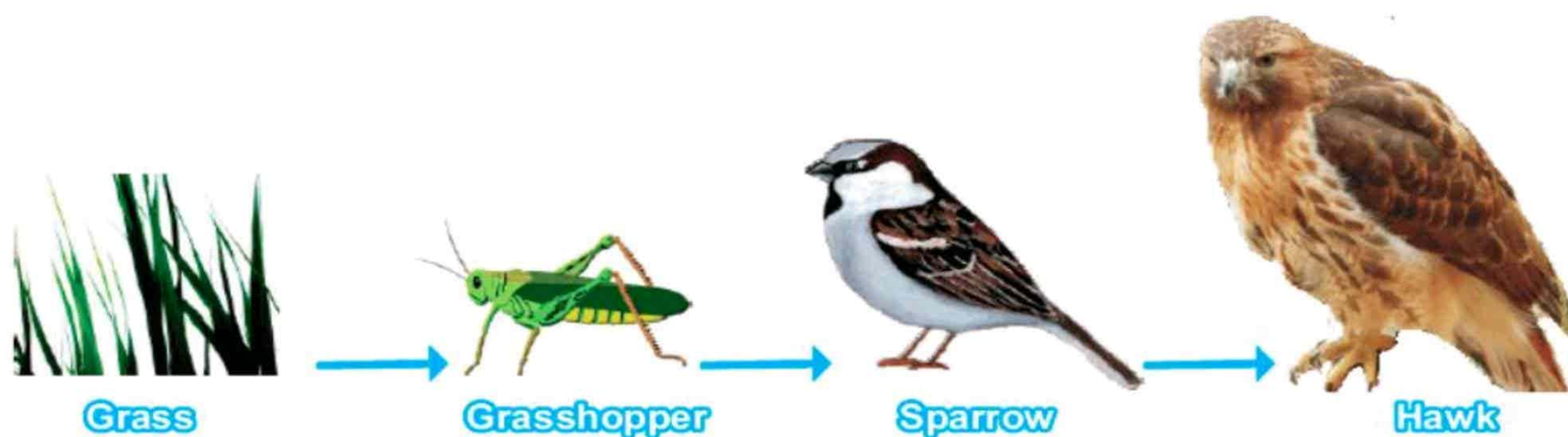


Figure A simple food chain

Q23: **What is meant by ecological pyramids? Write names of its two types.**

Ans: A representation of the number of individuals or amount of biomass or energy present in various trophic levels of a food chain. Ecological pyramids are of three types.

Names of its two types:

- Pyramid of Numbers
- Pyramid of biomass

Q24: Define biomass.

Ans: The total amount of living or organic matter in an ecosystem at any time is called Biomass.

Q25: What is meant by pyramids of numbers?

Ans: It is the graphic representation of the number of individuals per unit area at various trophic levels. Usually producers are present in lesser number; secondary consumers are fewer and so on. So, the producers are smallest size but maximum in number, while Tertiary consumers are large in size but lesser in number.

Q26: What is meant by pyramids of biomass?

Ans: It is the graphic representation of biomass present per unit area at different trophic levels. In a terrestrial ecosystem, the maximum biomass occurs in producers, and there is progressive decrease in biomass from lower to higher trophic levels.

Q27: Why is carbon cycle called a perfect cycle?

Ans: Carbon cycle is a perfect Cycle in the sense that carbon is returned to atmosphere as soon as it is removed.

Q28: What is meant by fossil fuel? Give two examples.

Ans: Fossil fuels are formed over long period of time from decay of plants and animals. Petroleum, natural gas and coal are the fossil fuels.

Examples of the fossil fuels are:

- Petroleum
- Natural gas
- Coal

Q29: What are environment friendly fuels?

Ans: Lead-free fuels should be used in automobiles. Similarly, Sulphur-free should be used in coal based industry to reduce pollution by Sulphur. OR
Lead-free and sulphur free fuels are environment friendly fuel.

Q30: Define Nitrogen Fixation. Write its various types.

Ans: **Nitrogen Fixation:**

Conversion of nitrogen gas into nitrates is called nitrogen fixation.

Nitrogen Fixation has two types:

- Atmospheric nitrogen Fixation
- Biological nitrogen fixation

Q31: What is meant by biogeochemical cycles?

Ans: **Biogeochemical cycles:**

Biogeochemical cycles are the cyclic pathways through which material move from environment to organism and back to the environment.

Q32: Define ammonification.

Ans: Ammonification is the breakdown of the proteins of dead organisms and nitrogenous wastes (urea, uric acid etc.) to ammonia. It is done by ammonifying bacteria.

Q33: What is meant by assimilation?

Ans: **Assimilation:**

The nitrates formed by the above processes are absorbed by plants and are utilized for making proteins etc. Animals take nitrogenous compounds from plants. The utilization of nitrates by organisms is called assimilation.

Q34: What is industrial nitrogen fixation?

Ans: Industrial nitrogen fixation is:

In industrial nitrogen fixation, hydrogen is combined with atmospheric nitrogen under high pressure and temperature. It produces ammonia which is further converted into ammonium nitrate.

This diagram is just for information.

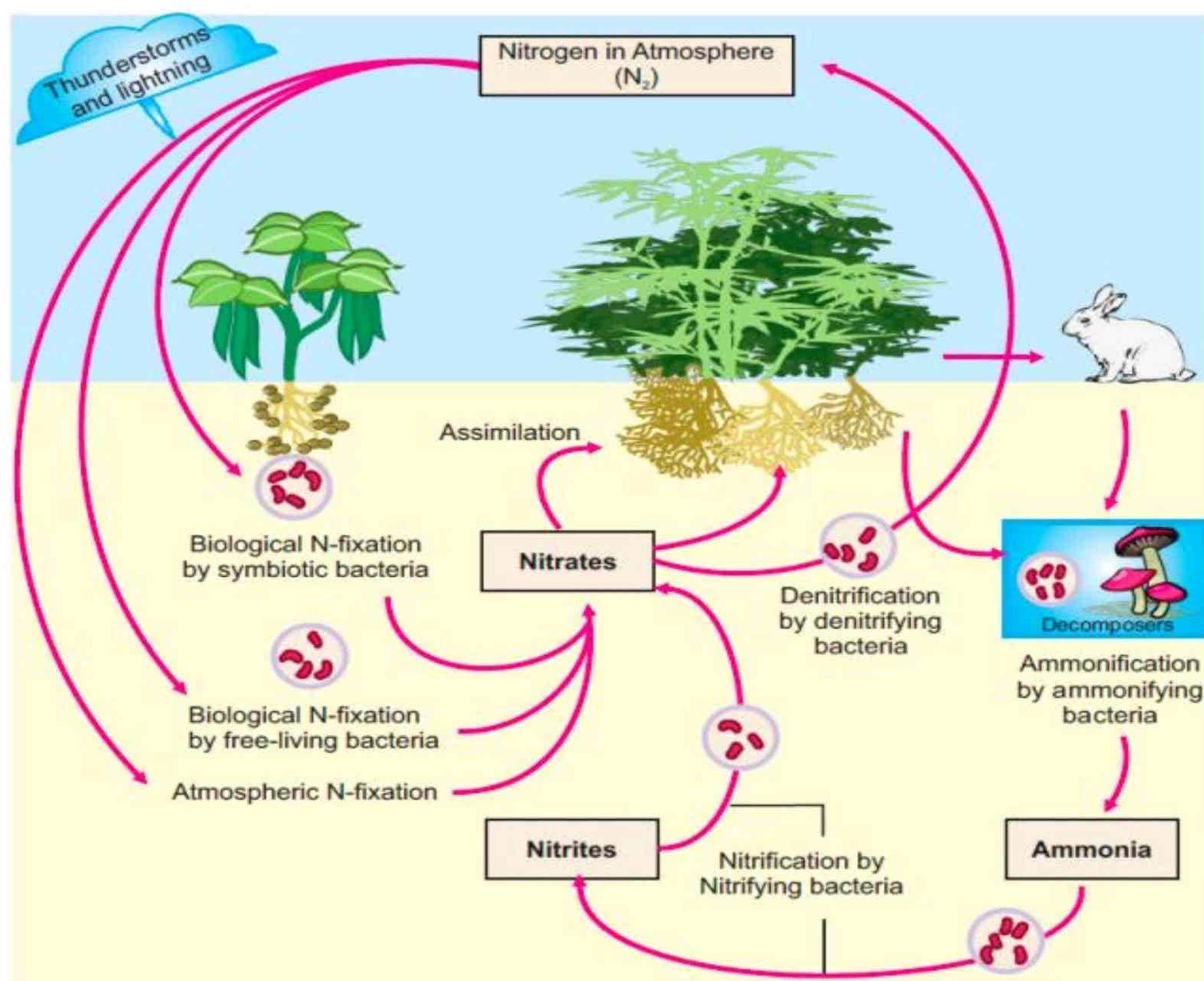


Figure Nitrogen cycle



Q35: **Differentiate between nitrification and de-nitrification.**

Ans: Difference between nitrification and de-nitrification is:

Nitrification	De-nitrification
When ammonia is converted into nitrites and nitrates called nitrification.	It is biological process in which nitrates and nitrites are reduced to nitrogen gas by denitrifying bacteria. By this process, nitrogen is returned to atmosphere called de-nitrification.

Q36: **Write down two methods of Nitrogen Fixation.**

Ans: Two methods of Nitrogen Fixation are:

- Thunderstorm and lighting convert atmosphere gaseous nitrogen to oxides of nitrogen. These oxides dissolve in water and form nitrous acid and nitric acid. The acid in turn combined with other salts to produce nitrates it is called atmospheric nitrogen fixation.
- Some bacteria also have the ability to transform gaseous nitrogen into nitrates. It is called biological nitrogen fixation.

Q37: **What is difference between intra-specific and inter-specific interactions?**

Ans: The difference between intra-specific and inter-specific interactions is:

Intra-specific interactions	Inter-specific interactions
The interaction between the members of the same species is called intraspecific interaction.	The interaction between the members of different species is called interspecific interaction.

Q38: **What is Competition? What are its types?**

Ans: In ecosystem, the natural resources e.g nutrients and space etc. are usually in short supply. So there is a competition among the organisms of ecosystem for the utilization of resources. The competition may be intraspecific or interspecific.

Q39: **Define Predation. Give two examples.**

Ans: **Predation:**

Predation is an interaction between two animals of different species or a plant or an animal. In this one organism attacks, kills and feeds on other organisms.

Example:



- Frog preys upon mosquito.
- Fox prey upon rabbit.

This diagram is just for understanding.



Frog preys upon insect

Snake preys upon frog



Fox preys upon rabbit

Lion preys upon zebra



Figure Examples of predators and their preys

Q40: Differentiate between symbiosis and commensalism.

Ans: The difference between symbiosis and commensalism is:

Symbiosis	Commensalism
Symbiosis is a relationship between members of different species, in which they live together for longer or shorter period of time.	Commensalism is a type of symbiosis in which one partner is benefited while the other is neither benefited nor harmed.

Q41: Name different types of symbiosis.

Ans: Symbiosis is of three types:

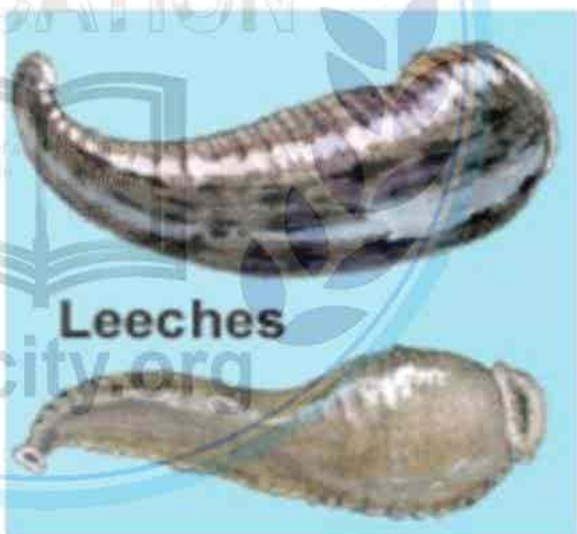
- Parasitism
- Mutualism
- Commensalism

Q42: Define parasitism and give an example.

Ans: It is a type of symbiosis in which smaller partner derives food and shelter from the body of large partner and in turn harms it.

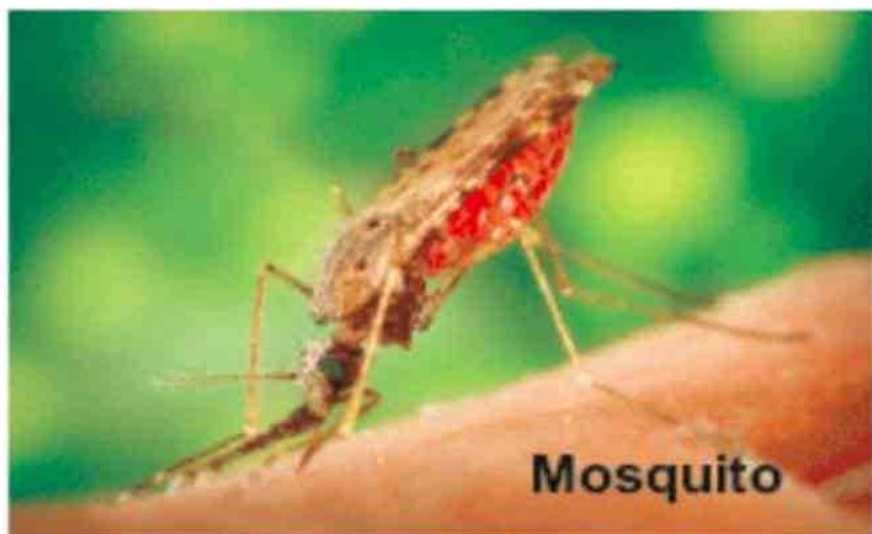
Examples:

- Mosquitoes
- Leeches
- Lice



Leeches

Leeches



Mosquito

Mosquito

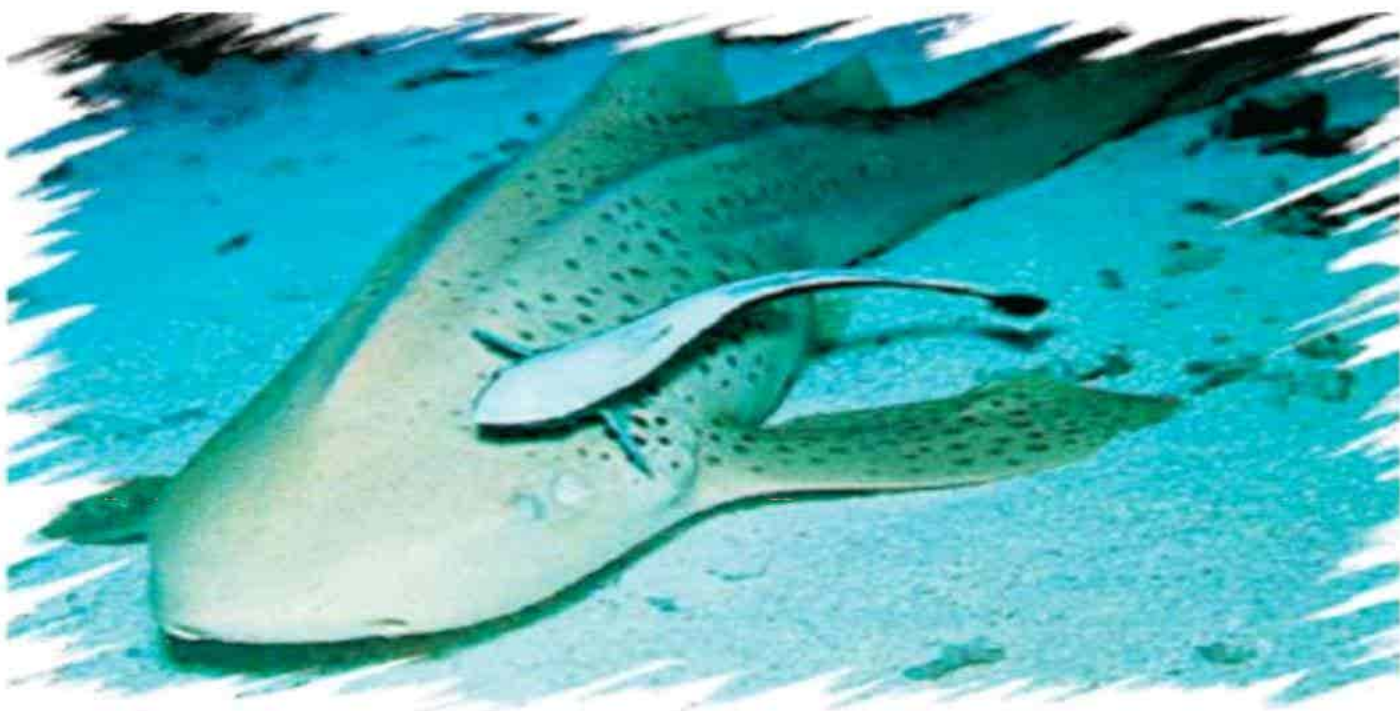
Q43: What is meant by commensalism give an example?

Ans: It is a type of symbiosis in which one partner is benefited while the other is neither benefited nor harmed.

Commensalism example Sucker fish attacks to the surface of sharks by its sucker. In this way, the shark provides easy transport to the sucker fish to new feeding grounds.



a-



b-

Figure a- An epiphyte orchid plant growing on a tree trunk; b- A sucker fish attached with shark

Q44: Define mutualism and give example.

Ans: In this type of symbiotic interaction, both partners get benefit and neither is harmed.

For example termites eat wood but are not able to digest it. A protozoan lives in its intestine. It secretes cellulose enzyme to digest the cellulose of wood. In return the termite provides food and shelter to the protozoan.

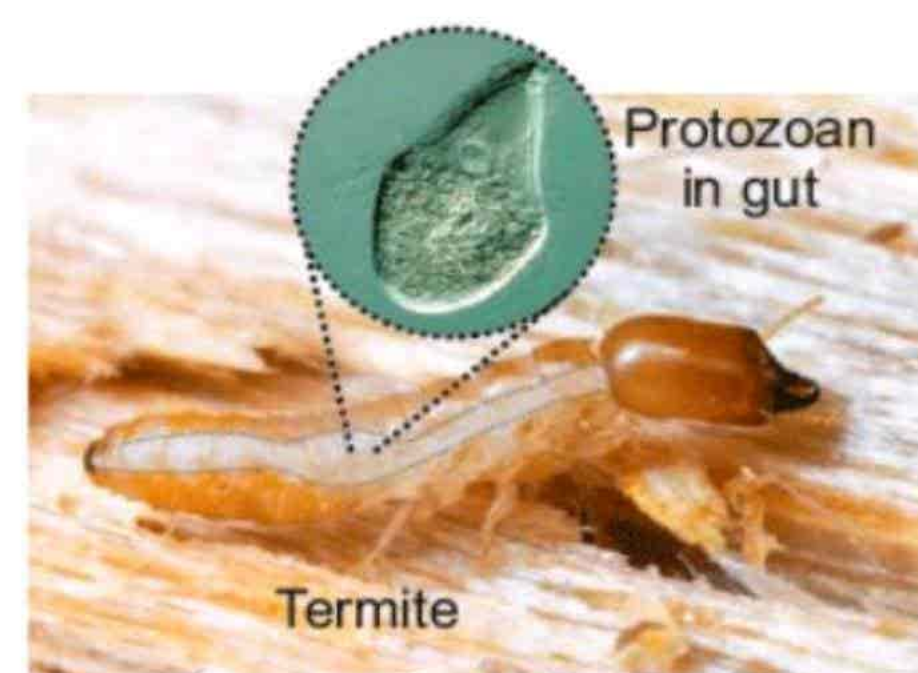


Figure : Termite, with a protozoan in its gut

Q45: What are epiphytes?

Ans: Epiphytes are small plants found growing on other larger plants for space only. They absorb water and minerals from atmosphere and prepare their own food. The larger plants are neither benefited nor harmed in any way.

Q46: Differentiate between ectoparasite and endoparasite.

Ans: The difference between ectoparasite and endoparasite is:

Ectoparasite	Endoparasite
Ectoparasites live outside i.e. on the surface of host's body and get food from there. Mosquitoes, leeches, lice etc. are the examples of ectoparasites.	Endoparasites live inside the body of host and get food and shelter. Bacteria, viruses, tapeworm, Ascaris, Entamoeba, Plasmodium etc. are the examples of endoparasites.

Q47: Define Global Warming.

Ans: Global Warming:

The addition of greenhouse gases (e.g, carbon dioxide, methane or ozone) in atmosphere. These gases remain in the lowest part of earth's atmosphere and do not allow the solar radiation to reflect into the space is called global warming.

Q48: What are the effects of global warning?

Ans: The effects of global warning are:

Due to global warming, polar ice-caps and glaciers are melting fast than the time taken for new ice layers to form sea water is also expanding causing sea level to rise. Due to melting of glaciers, rivers overflow and cause floods.

Q49: Write the examples of human impacts on ecosystem balance.

Ans: The examples of human impacts on ecosystem balance are:

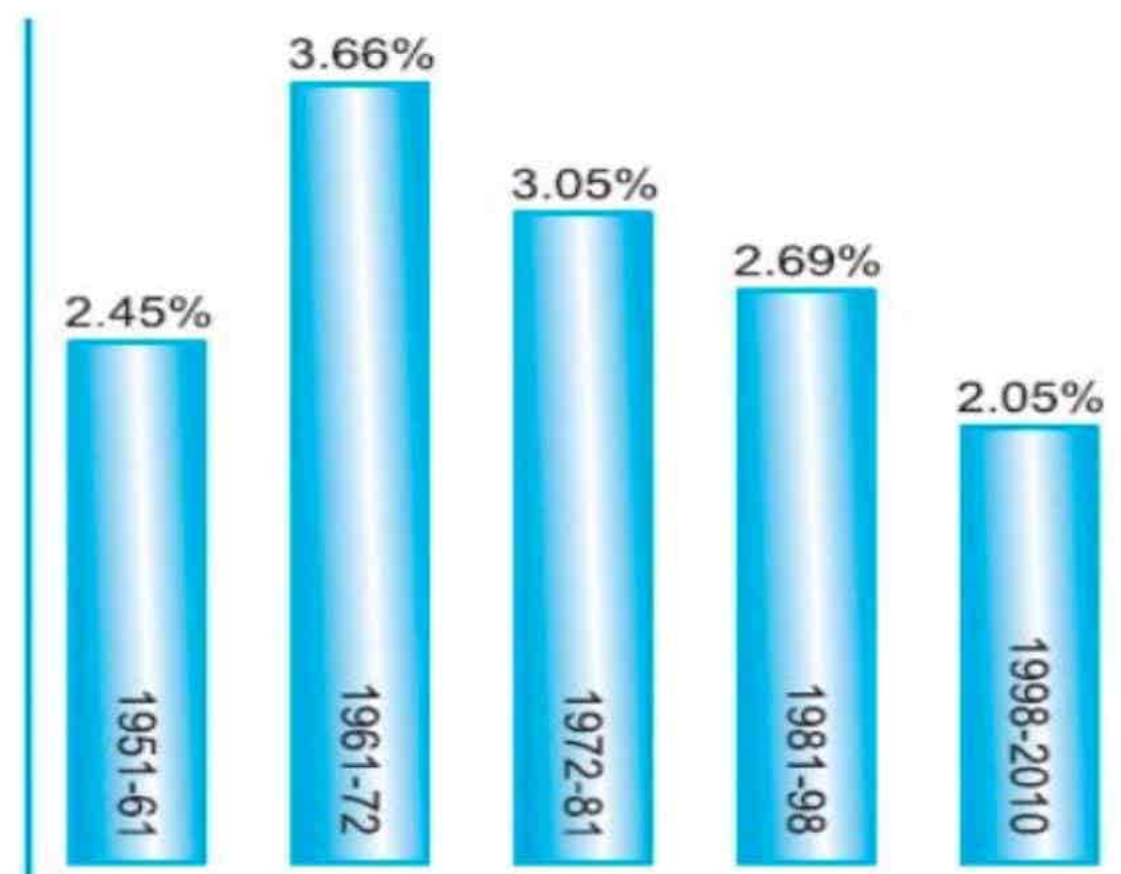
- Global warming
- Acid Rain
- Deforestation
- Urbanization
- Overpopulation

Q50: What is Over Population?

Ans: When population exceeds the carrying capacity of an area of environment, it results in over population.

Just for your information.

Year	Population
1981	85,096,000
1984	92,284,301
1987	99,953,232
1990	107,975,060
1993	116,444,165
1996	125,409,851
1999	134,790,000
2002	144,902,409
2005	155,772,000
2008	166,111,487
2009	169,708,303
2010	173,510,000



Pakistan Population Growth Rates
Source: Pakistan Economy survey
Ministry of Population Welfare
Government of Pakistan



Pakistan Urban population in %age
Source: The world Bank

Q51: What is urbanization? Give its two reasons.

Ans: Urbanization means growing of cities.

People move from rural areas to cities in search of better jobs, education opportunities and higher standards of living.

Q52: Write the effects of air pollution.

Ans: We have studied that global warming is one of the consequences of air pollution. Other effects of air pollution are as follows.

- Smog formation.
- Acid Rains.
- Ozone depletion.

Q53: Write two disadvantages of deforestation.

Ans: The effects of deforestation include floods, droughts, landslides, soil erosions, global warming and loss of habitat of many species.

Q54: What is Acid Rain? Give its one ill effect.

Ans: Acid Rain:

The air pollutant like sulphur dioxide and nitrogen oxide react with water in atmosphere and producing acid rain.

Effect:

Acid rain washes nutrients out of soil, damages the bark and leaves of trees and harms root hairs. Leaf pigment also destroyed.

Q55: Write the two causes of land Pollution.

Ans: The two causes of land Pollution are:

- The Acid rain changes the pH of soil making it unsuitable for cultivation.
- Open Latrines in villages and cities are also the source of land pollution.

Q56: What is Ozone Depletion?

Ans: Ozone Depletion:

The air pollutant like chlorofluorocarbon (CFCs) destroy the ozone layer, Ozone holes are created which permit UV rays to reach the earth surface. The UV rays increases the temperature and causes skin cancer.

Q57: Which chemicals is damaging ozone layer?

Ans: Chlorofluorocarbons (CFCs) destroy the ozone molecules so, break the ozone layer.

Q58: How is smog formed? Write its two disadvantages.

Ans: When pollutants like hydrocarbons and nitrogen oxides combine in the presence of sunlight, smog is formed. This is the mixture of gases. It forms a yellowish brown haze especially during winter and hampers visibility. It also causes many respiratory disorder and allergies as it contains polluting gases.

Q59: How can we control the land pollution?

Ans: There should be suitable and safe disposal of wastes including nuclear wastes. Non-biodegradable materials like plastic, glass, metals etc. should be recovered and recycled. Inorganic pesticides should be replaced by organic pesticides.

Q60: What is greenhouse effect? Write the name of two important greenhouse gases.

Ans: The Term Greenhouse effect refers to the phenomenon in which certain gases trap heat in the atmosphere. These gases act like the glass in a greenhouse, which does not allow the inner heat to escape.

Carbon dioxide, methane and nitrous oxide are important greenhouse gases.

Q61: What is eutrophication? Write its any one reason.

Ans: Eutrophication:

Enrichment of water with inorganic nutrients is called eutrophication.

The sewage and fertilizer contain large amount of inorganic material. When sewage and fertilizer reach water bodies, the nutrient present in them promote algal blooms there. Rich algal growth leads to increase in the number of the decomposers.

Q62: What are pollutants? Give two examples?

Ans: The substances that actually cause pollution are called the pollutants.

Examples:

Carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons etc.


Q63: **Write names of two heavy metals causing water pollution.**

Ans: Names of heavy metals causing water pollution are:

- Lead
- Mercury
- Arsenic
- Cadmium also makes the water polluted.

Q64: **Differentiate between deforestation and afforestation.**

Ans: The difference between deforestation and afforestation is:

Deforestation	Afforestation 
It is the cutting down plants. Deforestation means cutting of trees to get wood.	It means the establishment of new forests by planting on non-forest areas.

Q65: **What is pollution?**

Ans: Pollution is defined as any undesirable change in the physical, chemical or biological characteristics of air, water and land that may harmfully affect living organisms and natural resources.

Q66: **Write Down the symptoms of dengue fever.**

Ans: Symptoms of dengue fever include high fever, severe headache, pain behind the eyes, muscle and joint pain and rash.

Q67: **Differentiate between renewable and non-renewable resources.**

Ans: The difference between renewable and non-renewable resources is:

Renewable resources	Non-renewable resource
The renewable resources are e.g. air are reproduces easily.	The non-renewable resources e.g. minerals and fossil fuels are not replenished once they get depleted.

Q68: **What is meant by R-3?**

Ans: **R-3 Recycle:**

Materials such as paper, plastic, glass etc. can be recycled. This decreases the volume of refuse and helps in the conservations of natural resources.

Q69: **Write biological name of dengue mosquito.**

Ans: *Aedes aegypti* is the biological name of dengue mosquito.

Q70: **Differentiate between Predator and Prey.**

Ans: It is an interaction between two animals of different species or between a plant and an animal. In predation, one organism (the predator) attacks, kills and feeds on other organism (the prey).

Q71: **Why should we reduce the use of natural resources?**

Ans: We have to conserve the non-renewable resources because their reserves are limited and humans are heavily dependent on them for daily needs. To ensure sustainable use of resources in our environment, we should act upon the principle of 'The 3R' i.e. Reduce, Reuse, and Recycle.

Q72: **Write the name of two types of pollutants.**

Ans: The name of two types of pollutants is:

- Bio degradable
- Non bio degradable

Q73: **Narrate the kinds of Interaction in Ecosystem.**

Ans: In all ecosystems, there are many kinds of interactions among living organisms. The interactions between, the members of the same species are called intraspecific interactions

while the interactions between the members of different species are called interspecific interactions.

Some important interactions among living organisms in ecosystems are given below.

- Competition
- Predation
- Symbiosis

Q74: State the mutual relationship of sucker fish and shark.

Ans: Sucker fish attaches to the surface of sharks by its sucker. In this way, the shark provides easy transport to the sucker fish to new feeding grounds.

Q75: What is dengue fever? How it is transmitted?

Ans: Dengue fever is a viral infection transmitted through a mosquito *Aedes aegypti*.

Q76: Define Thermodynamics.

Ans: Energy can neither be created nor destroyed but can be transformed from one form into another.

Q77: What is meant by environment of an organism?

Ans: An organism's environment is the-sum of physical and biological Conditions which influence that organism.

Q78: What is meant by 3R principle?

Ans: 3R principle is:

- R-1: Reduce
- R-2: Reuse
- R-3: Recycle

Q79: What are two major sources of carbon in the living world?

Ans: Major Source of Carbon for the living world is Carbon dioxide present in. atmosphere and water.

Q80: Why tertiary carnivores are called top carnivores?

Ans: Tertiary carnivores are not eaten by any other animals so they are also called-top carnivores.

Q81: Write down examples of Carnivores plants.

Ans: Pitcher plants, Sundew, Venus fly trap are carnivore's plants.

Q82: From where producers get their energy and in which form they store it?

Ans: Producers get solar energy and transform it into chemical energy by the process of photosynthesis. They store their energy in their tissues and also transmit into mechanical and heat energy during their metabolic activities.

Q83: In which form carbon is found in nature?

Ans: Carbon is found as graphite and diamond in nature.

Q84: What is the threat of Maldives of ocean?

Ans: Scientist fears that the sea level is rising up to 0.9cm a year. Rise in sea level has worst effect on coastal countries. Most of the islands of the Maldives are less than 1m above sea level. It is estimated that within 100 year the Maldives might become uninhabitable and the citizens would be forced to evacuate.

Q85: What are the effects of de-nitrification above normal?

Ans: Excessive de-nitrification reduces soil fertility and is stimulated by water logging, lack of aeration and accumulation of organic matter in the soil.

Chapter : 16

Man and his Environment

**★ Long Questions ★**

- Q.1: What methods are used to control air pollution?
- Q.2: Write a short note on Aids.
- Q.3: Describe the causes and bad effects of acid rains.
- Q.4: Write a note on Land Pollution.
- Q.5: Describe produces and consumers of an ecosystem. OR Describe the components of ecosystem. OR Write a note on consumers. V.imp
- Q.6: Explain the flow of materials in an ecosystem.
- Q.7: Define Ecological Pyramids. Explain Pyramid of Biomass.
- Q.8: Explain different methods of nitrogen fixation. V.imp
- Q.9: What is Mutualism?
- Q.10: How do both the organisms get benefit?
- Q.11: What is symbiosis? Describe it with an example. V.imp
- Q.12: Explain nitrogen cycle.
- Q.13: Explain carbon cycle and draw its diagram.
- Q.14: What is Commensalism? Explain with examples.
- Q.15: What do you know about acid rain. Write its causes and disadvantages. V.imp

