Question 1: What is the study of living organisms and their interactions with the environment?
Student Answer: Ecology

Question 2: What term refers to all the living organisms in a particular area?
Student Answer: Community

Question 3: What is the term for a group of organisms of the same species in a specific area?
Student Answer: Population

Question 4: What is the term for the area where an organism lives and interacts with other organisms?
Student Answer: Ecosystem

Question 5: What term refers to the physical and biological factors that influence organisms in a particular area?
Student Answer: Abiotic factors.

Question 6: What term describes the diversity of species, ecosystems, and genetic variation in an area?
Student Answer: Biodiversity

Question 7: What term refers to the organisms at the first trophic level of an ecosystem, typically plants?
Student Answer: Producers

Question 8: What is the process by which plants make their own food using sunlight?
Student Answer: Photosynthesis

Question 9: What term refers to the movement of energy through an ecosystem via food chains or webs?
Student Answer: Energy flow

Question 10: What is the term for the process of restoring damaged ecosystems?
Student Answer: Restoration

Question 11: What is an ecosystem?
Student Answer: The interaction between both living(biotic) and non-living (abiotic) factors in an environment. eg- aquatic ecosystem: abiotic - water, stones/rocks, air, sand etc. & biotic - fishes, crabs, Plants, algae, etc.

Question 12: How does energy flow through ecosystems?
Student Answer: In any ecosystem, energy flows from the producers to the consumer of higher trophic level, while abiding the 10% law. Sun Producers Plants Primary consumers secondary consumer Rodents snakes eagle decomposers
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Question 13: What are the key differences between an individual and a population in ecology?
Student Answer: An individual refers to the single organism of species, whereas Population is the group of individuals of the same species in an area.

Question 14: How do human activities impact biodiversity?
Student Answer: Human activities such as habitat destruction, pollution, over-exploitation is destroying our ecosystem and biodiversity. This in turn affects us in form of climate change, diseases, natural disasters, human-wildlife conflict, global warming, etc.

Question 15: What is the role of decomposers in an ecosystem?
Student Answer: Decomposers are the link that makes a linear food chain circular. It decomposes the dead organic matter into simpler nutrients which is then used by plants for their process.

Question 16: What are trophic levels in an ecosystem?
Student Answer: Trophic levels are the successive consumer levels in a food chain. It starts from producers and goes uptill tertiary consumer. It also show the energy flow.

Question 17: Why is primary productivity important for ecosystem functioning?
Student Answer: Primary productivity refers to the energy stored by the producers and is important for the ecosystem functioning as it kickstarts the food chain/web.

Question 18: What is mutualism in ecological interactions?
Student Answer: Mutualism is a positive-positive ecological interaction, where both species (in matter) are benefitted from each other. eg- Bees pollinates flowers and also get nectar in return.

Question 19: What is habitat fragmentation?
Student Answer: Breaking up of a large habitats into smaller fragments during human settlements, agriculture activities, and other human activities. eg In Kodagu, coffee & tea plantations has fragmented the forests there.

Question 20: Explain the 10% rule in energy transfer.
Student Answer: The 10% rule states that only 10% energy is stored within an organism and can be transferred to next trophic level. Rest 90% is lost as heat and used in other processes.

Question 21: What is the role of species diversity in ecosystem functioning?
Student Answer: Species diversity is the variety of species in an ecosystem. So more diversity results in stable ecosystems, better food-webs to keep populations in check, controls disease spread and maintains a gene pool within species.

Question 22: Explain the importance of conservation biology and the strategies used to conserve biodiversity.
Student Answer: Conservation biology is important as it mainly focuses on conservation and sustainability. Some strategies used to conserve biodiversity are - reforestation, making norms to control exploitation of natural resources, wildlife corridors to avoid human

interference, programmes that create awareness and push for sustainable development, world leaders collaborating for the cause, etc.