Grade 11 | SCIENCE | Unit : 15 – Biosphere

01) What is the reason for greenish colour of water in the "Beire" lake in Colombo?

i) Growth of Algae

ii) Growth of water plants

iii) Because water does not flow.

iv) Because of green coloured water released from factories.

02) Which of the following may not be a situation that arises due to the break down of the balance in the natural environment?

i) The water cycle getting disrupted.

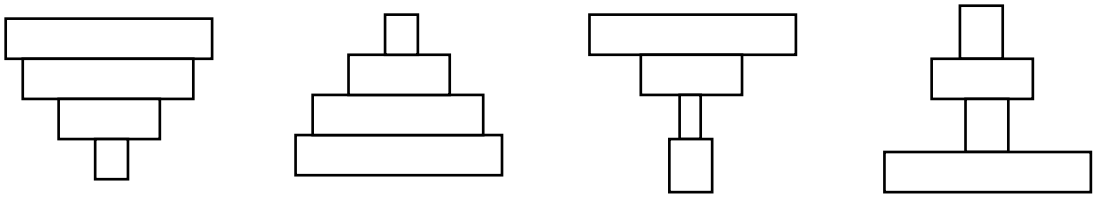
ii) Rapid increase of pests.

iii) Dying of people due to lightning.

iv) Endemic organisms facing threat of extinction.

03) A kingfisher eats carnivorous fish that feed on small fish. Small fish feed on plant leaves. Which diagram shows the pyramid of biomass for this food chain.

i) ii) iii) iv)



04) Population is the,

i) Group of similar organisms who can interbreed naturally to produce fertile offspring's.

ii) All the communities and non – living components with each other in a particular area.

iii) A group of organisms belong to the same species in a particular geographical location during a specific time period.

iv) A single organism belong to a particular spieces.

05) Correct sequence of the organizational levels in the environment from simple to complex is,

i) Population → Community → biospher → Ecosystem

ii) biosphere → Eco – system → population → Community

iii) Population → Community → ecosystem → Biosphere

iv) Community → Population → Eco – system → Biosphere

06) A grasshopper on the grass was eaten by a frog. In this situation frog is a,

i) Producer ii) Primary consumer

iii) Secondary consumer iv) Tertiary consumer

07) The individuals belongs to the same spieces in a certain community is known as,

i) Population ii) Phylum iii) Class iv) Order

08) The gas damages the ozone layer of the atmosphere is,

1) Carbondioxide ii) Methane

iii) Nitrogen dioxide iv) Chloro Fluoro Carbon

09) The amount of Carbondioxide can be controlled in a certain environment by,

i) Live stock breeding ii) Plant growing

iii) Eating meat iv) Buring of waste materials

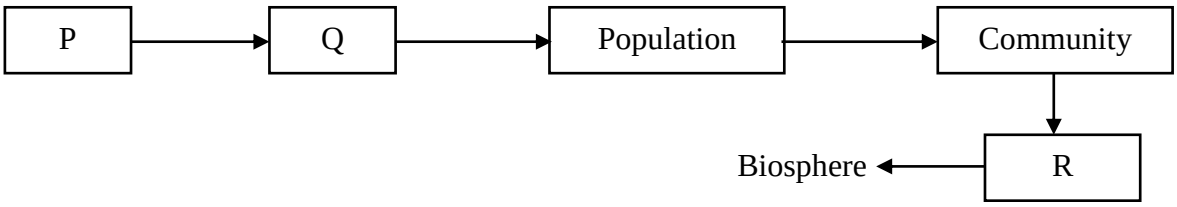
10) The gas effects for the acid rain is,

i) Carbon dioxide ii) Carbon monoxide

iii) Sulphur dioxide iv) Nitrous oxide

STRUCTURED ESSAY QUESTIONS

01) Organisms are organized from simple level to complex level in the environment. The organizational levels of the environment are as follows.



i) Name the organizational levels shown as P, Q and R.

P ..... Q ..... R .....

ii) For which organisational level given above is the following an example?

A beach with rocks and cliffs.

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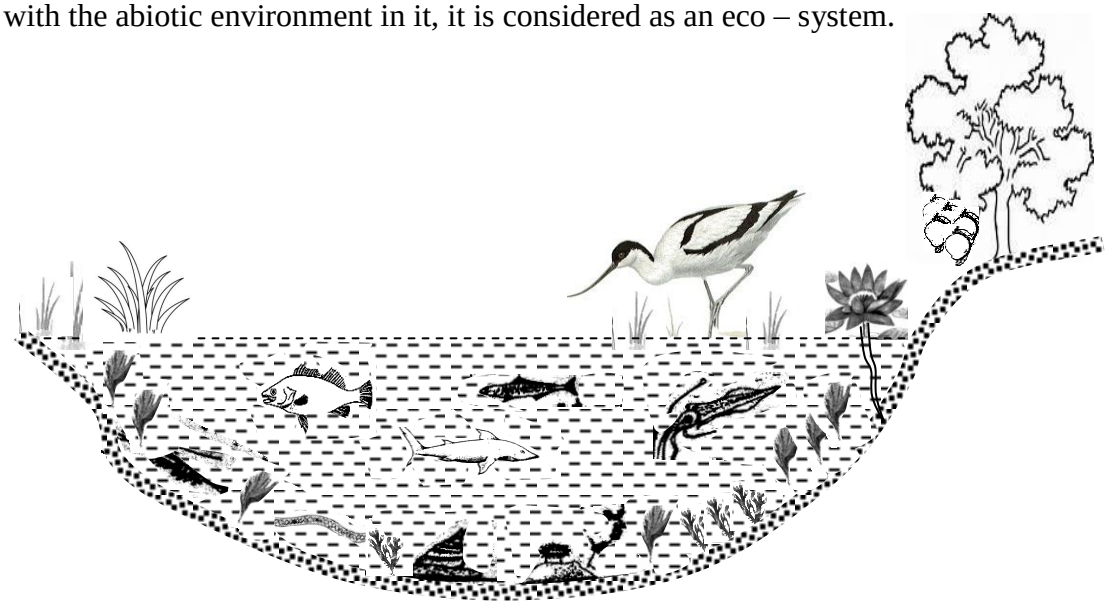
iii) A pond is shown in the figure since the organisms in the pond have interrelationships with the abiotic environment in it, it is considered as an eco – system.



a) Name an aquatic plant which can be grown in the pond.

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b) Write an adaptation of that plant to the aquatic environment.

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c) Write a food chain that can be found in a pond.

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d) Name 2 substances that can be circulate in an eco – system.

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e) Show by way of a pyramid diagram how energy from one trophic level passes to the next trophic level in the food chain you mentioned above.

f) Out of the energy obtained by a herbivore by taking in plant matter as food, only a very small portion is deposited in its body tissues. state one way by which the rest is used up or removed.

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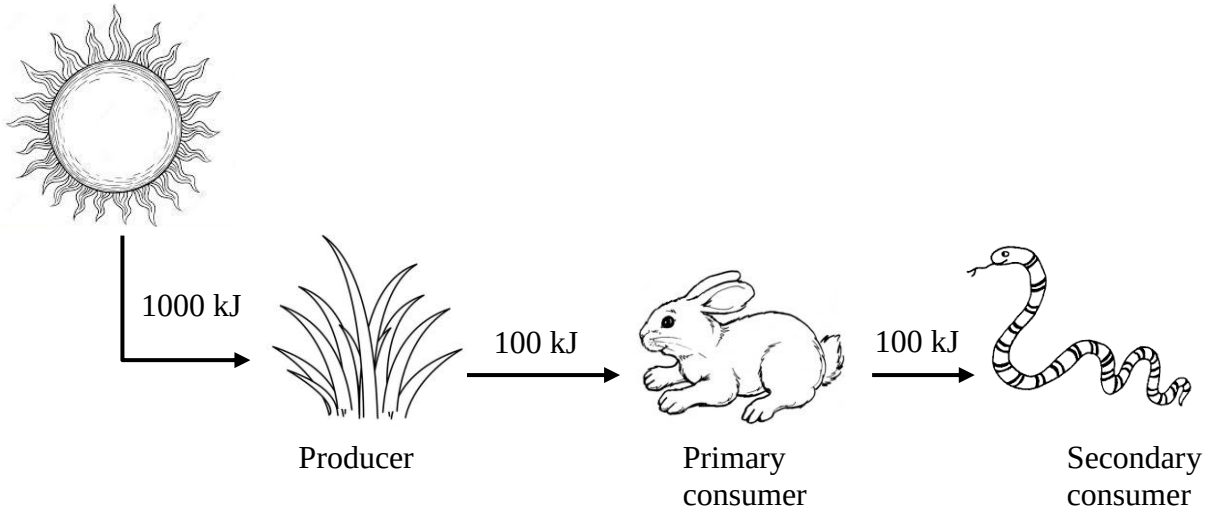
02) The diagram below shows the energy flow in a food chain.



i) Omnivores take in plant matter as well as animal matters as food. but the more efficient method of obtaining the maximum amount of solar energy fixed by green plants is taking in plant material directly as food. Explain this idea.

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ii) As given in the diagram find the energy releases from the herbivorous animals as their waste matter if 100 kJ of energy is entered to the food chain.

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iii) "It is more efficient to a man if the energy needed is fulfilled by the plant resources other than animal resources" Explain the reason.

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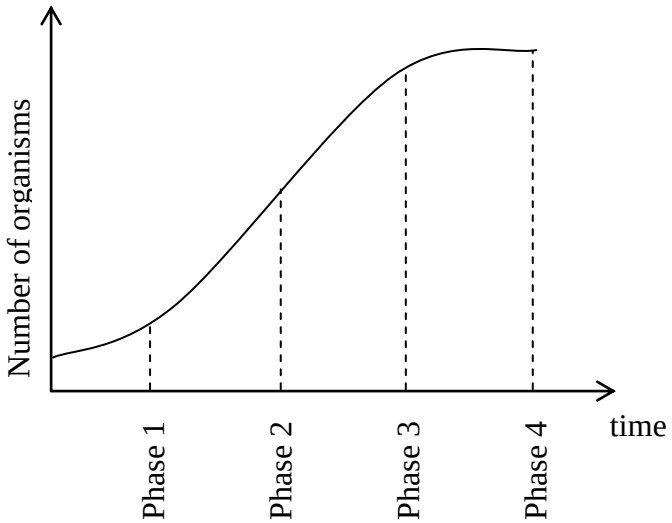
ESSAY QUESTIONS

01) Pattern of change in the number of organisms of a natural population with time is shown in the graph.



i) What is the reason for the slow growth rate in phase 3.

ii) In which phase does the number of organisms begins to increase in the population.

iii) Define the given terms.

a) Species b) Community

iv) What is the special feature can be identified in the phase H.

v) Plot a graph to show the growth curve of human population.

02) a) i) What is known as water foot print?

ii) Name two ways to minimize water foot.

iii) "Reuse" is a method of minimizing the environmental pollution.

a) What is meant by "reuse"

b) Name 2 substances that can be reused in your daily life.

b) i) State 2 gases responsible for acid rains.

ii) Write 2 advantages of using public vehicles instead of private vehicles.

iii) Write a harmful effect of each of the following.

a) Global warming

b) Ozone layer depletion

c) Acid rain

iv) What is the function of ozone layer.

v) The depletion of the ozone layer could be regarded as an unfavourable result of the change in the balance of the natural environment caused by human activities.

Write an adverse effect directly experienced by man due to the depletion of the ozone layer.