



# DAV NANDRAJ PUBLIC SCHOOL

## BARIATU, RANCHI

### FREQUENTLY ASK QUESTIONS IN BOARD EXAMINATION (XII)

**SUBJECT: BIOLOGY**

**CHAPTER NAME:**

---

Q1: Expand GMO. Highlight any four advantages of GMOs.

Q2: (a) What is 'gene therapy'?

- (b) Name the deficiency for which gene therapy was first used
- (c) Explain the process of gene therapy to treat this disease.
- (d) Mention one permanent cure for this disease.

Q3: (a) Name the source from which insulin was extracted earlier. Why is this insulin no more in use by

diabetic people?

- (b) Explain the process of synthesis of insulin by Eli Lilly company.
- (c) How is the insulin produced by human body different from the insulin produced by the above mentioned company ?

Q4: Name the type of interaction seen in each of the following example:

- (a) Ascaris worms living in the intestine of humans.
- (b) Wasp pollinating fig inflorescence.
- (c) Clown fish living among the tentacles of sea anemone.
- (d) Orchid growing on a branch of a mango tree.
- (e) Disappearance of smaller barnacles when Balanus dominated in the coast of Scotland.

Q5: (a) Explain any two defence mechanisms plants have evolved against their predators.

- (b) How does predation differ from parasitism?
- (c) State any two positive roles that a predator plays in an ecosystem.

Q6: (a) What is age pyramid?

- (b) Explain the different kinds of age pyramids taking help of diagram.
- (c) Mention the one that is ideal for human population and why?

Q7: (a) Explain with the help of a graph and equation the population growth curve when resources are

- (i) limiting
- (ii) Non limiting

(b) Nature has a carrying capacity for a species .Explain.

Q8: Describe the process of decomposition of detritus under the following heads:

(i) Fragmentation

(ii) Leaching

(iii) Catabolism

(iv) Humification

(v) Mineralisation

Q9: (a) What is ecological pyramid?

(b) Draw the pyramids of biomass in a sea and in a forest. Explain giving reasons why the two pyramids are different.

(c) Pyramid of energy is always upright. Explain.

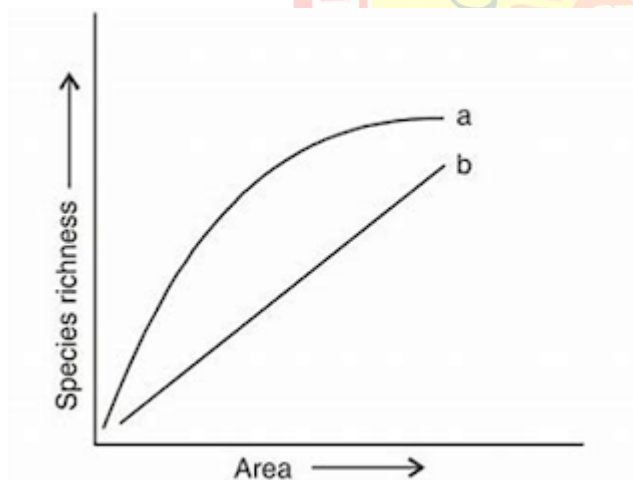
Q10: (a) Describe the inter relationship between productivity, gross primary productivity and net productivity.

(b) What is a trophic level in an ecosystem ? What is standing crop with reference to it ?

Q11: (a) Explain giving three reasons ,why tropics show greatest levels of species diversity.

(b) Explain the importance of biodiversity hotspots ,giving two examples of such hotspots in India.

Q12: The graph shows species area relationship:



(a) If 'b' denotes the relationship on log scale

(i) Describe 'a' and 'b'.

(ii) What kind of slope would be observed for frugivorous birds and mammals in a tropical forest ?

(b) Name the naturalist who studied the kind of relationship shown in the graph. Write the observations made by him.

Q13: (a) Write two advantages of transgenic animals in human welfare.

(b) Expand 'GEAC' .

(c) Why was GEAC set up by the Indian Govt.?

Q14: (a) Explain briefly co-extinction and over exploitation as causes of biodiversity loss with an example.

(b) Name any two alien invasive species that caused biodiversity loss.

Q15: (a) Name any two orders of insects along with an example each which can be killed by Bt strain.

(b) Explain the mode of action of Bt toxin against insects .

(c) Name any two genes responsible for coding Bt toxin.

