QB365 QUESTION BANK 365

QB365 Question Paper Software
12th Standard - Biology
Biodiversity and Conservation Assertion and reason

Exam Time: 00:20 Hrs | Date: 2025-09-29

Total Marks: 10

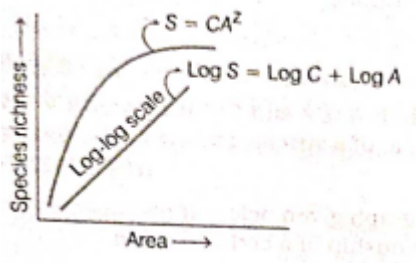
Questions:

1. **Assertion:** The rate of extinction of organisms have increased in recent years.
Reason: Human activities like deforestation, industrialisation, etc., have destroyed the natural habitat of plants and animals.
Codes:
(a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both assertion and reason are false.

2. **Assertion:** The introduction of Nile perch in lake Victoria caused cichlids to become extinct.
Reason: Nile perch is an indigenous species of East Africa.
Codes:
(a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both assertion and reason are false.

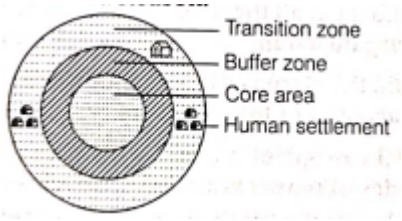
3. **Assertion:** There are 36 biodiversity hotspots in the world.
Reason : High level of species richness is a criteria for selection of a biodiversity hotspot.
Codes:
(a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both assertion and reason are false.

4. Given below is the graph showing species-area relationship. Alexander van Humbolt observe the relationship between species richness and area for a wide variety of taxa, turns out to be hyperbola. Observe the graph and answer the question



Assertion (A) : If the species-area relationhips are analysed among very large areas like the entire continents, the value of 2, i.e. slope of line lies in the range of 0.1 to 0.2.
Reason (R) : Larger is the explored area more is the steepness of slope of line.
(a) If both A and R are true and R is the correct explanation of the A
(b) If both A and R are true, but R is not the correct explanation of the A
(c) If A is true, but R is false
(d) If A is false, but R is true

5. The figure given below is showing the zonation in a terrestrial biosphere reserve. It consists of core buffer and transition zones. Study the figure and comment upon the appropriatness of Assertion and Reason.



Assertion (A) : Biosphere reserve is a specified area in which multiple use of land is permitted by dividing it into zones.
Reason (R) : These are the spaces where sustainable economic practices are developed.
(a) If both A and R are true and R is the correct explanation of the A
(b) If both A and R are true, but R is not the correct explanation of the A
(c) If A is true, but R is false
(d) If A is false, but R is true

6. Assertion (A) : The presently occurring species extinction is different from the earlier mass extinction.
Reason (R) : Present species extinction is due to natural causes, whereas the earlier extinction was due to the man-made causes.
(a) If both A and R are true and R is the correct explanation of the A
(b) If both A and R are true, but R is not the correct explanation of the A
(c) If A is true, but R is false
(d) If A is false, but R is true

7. **Assertion:** Speciation is a function of time and tropical regions had got a long evolutionary time for species diversification as compared to temperate regions.
Reason: Temperate regions have undergone frequent glaciations in the past whereas tropical regions have remained relatively undisturbed for millions of years.
Codes:
(a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.
(b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
(c) If Assertion is true but Reason is false.
(d) If both Assertion and Reason are false.

8. **Assertion (A) :** In India, ecologically unique and biodiversity-rich regions are, legally protected as biosphere reserves, national parks and sanctuaries..
Reason (R): The biological wealth of our planet has been declining rapidly and the accusing finger is clearly pointing to human activities..
Codes:

a) If bothA and R are true and Ris the correct explanation of A
b) If both A and R arc true, but R is not the correct explanation of A
c) If A is true, but R is false
d) If A&R are false

9. **Assertion(A) :** It is so special that the tropics is known for their greater biological diversity
Reason (R) : (a) because 1t has long period of Speciation, it is less seasonal and has more solar energy.
Codes:
a) If both A and R are true and R is the correct explanation of A
b) If both A and R arc true, but R is not the correct explanation of A
c) If A is true, but R is false
d) If A&R are false

10. **Statement I:** within a region species richness increased with increasing explored area, with no limit,
Statement II : the relation between species richness and area for a wide variety of taxa is a strait line
Codes:
a) I is true, but II is false
b) I is false, but II is true
c) Both I and II are true
d) Both I and II are false

Answers Key:

1. (a) Both assertion and reason are true and reason is the correct explanation of assertion.
2. (c) Assertion is true but reason is false.
3. **(b):** Hotspots are areas with high density of biodiversity or megadiversity which are also the most threatened ones. Ecologically hotspots are determined by four factors.
(i) Number of species/species diversity.
(ii) Degree of endemism
(iii) Degree of threat to habitat due to its degradation and fragmentation.
(iv) Degree of exploitation. Myers (1988) initially identified 12 hotspots. Today the number of hotspots identified by ecologists is 36.
4. (d) If A is false, but R is true
5. (b) If both A and R are true, but R is not the correct explanation of the A
6. (c) If A is true, but R is false
7. (a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.
Explanation:
Speciation is a function of time. Temperate regions have undergone frequent glaciations in the past, due to which many species had been killed. However, tropical latitudes have remained relatively undisturbed for millions of years and thus, had a long evolutionary time for species diversification.
8. a) If both A and R are true and R is the correct explanation of A
9. a) If both A and R are true and R is the correct explanation of A
10. d) Both I and II are false