

2022

ZOOLOGY

(Honours)

Paper Code : XI - A & B

[Ecology & Environmental Biology and Toxicology]

(New Syllabus)

Full Marks : 50

Time : Two Hours

Paper Code : XI - A

(Marks : 10)

Choose the correct answer.

Each question carries 1 Mark.

1. The largest reservoir of sulphur in the biosphere is the —
 - (A) Atmosphere
 - (B) Ocean
 - (C) Organism
 - (D) Rocks
2. Lichen is a symbiotic association of algae with —
 - (A) Protozoan
 - (B) Fungi
 - (C) Roots of plants
 - (D) Bacteria
3. Minamata disease was caused due to pollution of water by —
 - (A) Lead
 - (B) Mercury
 - (C) Tin
 - (D) MIC

4. The term ecology was coined by —
 - (A) A. G Tansley
 - (B) E.P Odum
 - (C) Ernst Haeckel
 - (D) F. Kormondy
5. Exponential growth occurs when there is —
 - (A) A great environmental resistance
 - (B) No environmental resistance
 - (C) No biotic potential
 - (D) A fixed carrying capacity
6. Measure of diversity among communities is known as —
 - (A) Alpha diversity
 - (B) Beta diversity
 - (C) Gamma diversity
 - (D) None of the above
7. Which of the following statement is true about the ecotone?
 - (A) It is meeting place of two different ecosystems
 - (B) It is meeting place of two same ecosystems
 - (C) Density of species is very low here
 - (D) All of the above
8. Acid rain causes —
 - (A) Destruction of forests
 - (B) Gradual killing of lakes
 - (C) Killing fish
 - (D) All of the above
9. The ecological study of individual species is called —
 - (A) Autecology
 - (B) Synecology
 - (C) Community ecology
 - (D) None of these

(3)

10. In succession which one of the following is the end point?

- (A) Pioneer community
 - (B) Climax community
 - (C) Both (A) and (B)
 - (D) None of the above
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(4)

Paper Code : XI - B

(Marks : 40)

*The figures in the margin indicate full marks.
Candidates are required to give their answers in their
own words as far as practicable.*

Unit - 1 : Ecology

1. Answer any *two* questions : 4×2=8
- (a) Explain mutualism with example.
- (b) Explain the J-shaped curve of population growth.
- (c) Differentiate food chain and food web with examples.
- (d) Write the difference between r-selected and k-selected species?
2. Answer any *one* question : 12×1=12
- (a) Write the characteristics of biotic community. What is competitive exclusion? Explain competitive exclusion in light of Gause's principle. 4+2+6=12
- (b) Write a short note on : 4+4+4=12
- (i) Nitrogen cycle
- (ii) Ecological pyramids
- (iii) Density dependent and density independent factors of population regulation
- (c) What is ecological succession? Give an illustrated account of the sequential stages of any one succession. 2+10=12

Unit - 2 : Environmental Biology and Toxicology

3. Answer any *two* questions : 4×2=8
- (a) Write briefly on arsenic pollution.
- (b) Write a short note on botulism.
- (c) What do you mean by acute and chronic toxicity?
- (d) Explain briefly on the ozone layer depletion.
4. Answer any *one* question : 12×1=12
- (a) Define water pollution. What are the principal types of water pollutants? Mention some of the detrimental effects of water pollution. 2+6+4=12
- (b) What are the major causes of destruction of forests in India? What measures should be taken for the conservation of forests of our country? Define ecotourism. 5+5+2=12

P.T.O.

(5)

(c) Write short notes on the following :

4×3=12

(i) Minamata disease

(ii) Photochemical Smog

(iii) Thermal Pollution
