

Five Year Integrated M.Sc. Examinations 2023
Semester - VII
Course: EES-4-7-5
(Ecology)

Time: 3 Hours

Full Marks: 40

Questions are of value as indicated in the margin.
Answer ***Question No.1*** and ***any four*** from the rest

1. Write short notes on **any four** of the following.
 - (a) Microbial loop
 - (b) Cascade hypothesis
 - (c) Energy language
 - (d) Biotic potential
 - (e) Gaia hypothesis
 - (f) Biosphere-2

2 x 4 = 8
2.
 - (a) Define ecosystem.
 - (b) Discuss various trophic structure of an ecosystem.
 - (c) Draw a functional diagram of an ecosystem and explain the internal dynamics involving energy flow and material cycles.

2+3+3 = 8
3.
 - (a) What is productivity?
 - (b) Distinguish the successive steps in the production process.
 - (c) Discuss the concept of energy subsidy.

1+4+3 = 8
4. Write short notes on the following
 - (a) Carbon cycles
 - (b) Universal model of energy flow

4+4 = 8
5. Explain 'r' and 'K' selection strategies for population growth

4+4 = 8
6. Write short notes on the following
 - (a) Clementsian approach of ecological succession
 - (b) Exponential growth curve

4+4 = 8
7.
 - (a) What is ecological pyramid?
 - (b) Describes different types of ecological pyramids you have studied.
 - (c) Distinguish between conventional with alternate agriculture by providing suitable diagrams.

1+ 4+3 = 8