

C.U.SHAH UNIVERSITY

Summer Examination-2018

Subject Name: Ecology & Evolutionary Biology

Subject Code: 4SC06EEB1

Branch: B.Sc. (Microbiology)

Semester: 6

Date: 23/04/2018

Time: 02:30 To 05:30

Marks: 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

Q-1 Attempt the following questions: (14)

- a) Define Ecology.
- b) Define biotic potential.
- c) Define Ecads.
- d) Define Allen's law with example.
- e) Define allopatric speciation.
- f) Earth was divided in to 3 major layers.....
- g) The pyramid of energy in any ecosystem is
- h) When both partners are affected negatively the nature of interaction is.....
- i) Energy flow in ecosystem is
- j) Microsphere is proposed by
- k) Phenomenon of " industrial melanism " demonstrates geographical isolation .T/F
- l) Continuity of germplam theory was given by Weisman.T/F
- m) Genetic drift operates only in large population .T/F
- n) Nail is vestigial organ of man .T/F

Attempt any four questions from Q-2 to Q-8

Q-2 Attempt all questions (14)

- a) What are the salient features of the Lamarckism concept of evolution? Critically examine this concept in the light of modern biology. (7)
- b) Explain briefly the process of soil formation. Also write a note on rock formation (7)

Q-3 Attempt all questions (14)

- a) Write an account on the evidences from comparative anatomy in support of organic evolution. (7)
- b) What is ecological pyramid? Explain different types of pyramids with the help of diagram and give example of each. (7)

Q-4 Attempt all questions (14)

- a) Write an essay on Neo-Darwinism theory. Differentiate between Darwinism and Neo Darwinism theory. (7)



b) What is soil erosion? How soil can erosion be prevented? (7)

Q-5 Attempt all questions (14)

- a) Write a note on age pyramids. (7)
b) Define mutation. Enlist various salient features of mutation theory. (4)
c) Illustrate the role of macroevolution with suitable example. (3)

Q-6 Attempt all questions (14)

- a) Write a short note on Hardy Weinberg’s law of equilibrium. (7)
b) Explain the mortality with survivorship curve. (4)
c) Write a short note on Co-evolution (3)

Q-7 Attempt all questions (14)

- a) Write a short note on evolutionary forces involved in speciation. (7)
b) Explain the population growth with help of graph. Also differentiate between r and k species. (7)

Q-8 Attempt all questions (14)

- a) Explain Miller’s experiment. What conclusions can be drawn from this experiment? (7)
b) Explain the zonation in lake water with help of suitable diagram. (7)

