

Serial No. : 3094

Unique Paper Code : 2232584801

Name of the Paper : Concepts of Evolutionary Biology (DSC)

Name of the Course : B.Sc. (Prog.) Applied Life Sciences

Semester : VIII (NEP UGCF)

Maximum Time : 2Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the question Paper
2. Q1 is compulsory.
3. Attempt FOUR questions. Each question carries equal marks.
4. Give suitable diagram where applicable.

Q1 A) Define the following:

(4x 1=4).

- i. Allochrony
- ii. Kin Selection
- iii. Coprolites
- iv. Tribolites

B) Distinguish Between :

(3 x2=6)

- i. Founder's effect and Bottle neck effect
- ii. Lethal gene and Silent gene
- iii. Hybrid Sterility and Heterosis

C) Mention the contribution of the following scientists:

(3X1=3)

- i. Ernst Haeckel
- ii. Mendel
- iii. Sydney Fox

D) Mention the statement is true or false:

(2x1=2)

- I. Migration helps to overcome the adverse environment.
- II. Evolution is the study of changes in the population over a prolonged time gap.

Q2 What is Lamarkism ? Give in brief the early theories of Evolution? (15)

Q3 Write a note of speciation? Why are heritable variations important in evolution?(15)

Q4 What are the different types of Natural Selection? Briefly explain the concept of fitness and selection coefficient?(15)

Q5 Briefly explain the process of Mass extinction? Give detailed explanation of K-T extinction?(15)

Q6 Write a short note on (any three) : (15)

- a) Molecular Clock
- b) Geological time scale
- c) Hardy Weinberg Law
- d) Endosymbiont Theory