

**CARMEL COLLEGE OF ARTS, SCIENCE & COMMERCE FOR WOMEN
NUVEM-GOA**

B.Sc. CBCS Semester V REPEAT Examination, July 2021

Subject Code: ZOC 107

Subject name: Molecular Biology and Evolution

Total Marks: 30

Duration: 2 hrs

Total No. of Pages:01

Instructions: 1. All questions are compulsory.

2. Figures to the right indicate marks allotted to the question.

3. Illustrate your answers wherever necessary.

Q.I. Answer ANY FIVE of the following:

(5x2= 10)

1. Differentiate between Purine and Pyrimidine.
2. Briefly explain 'Exon Shuffling'.
3. How does Eukaryotic translation differ from Prokaryotic translation?
4. What is Gene silencing?
5. What is a 'monotypic' species? Give a suitable example.
6. Differentiate between 'meristic' and 'substantive' variations.
7. What are co-adaptations? Give an example of the same.
8. Define the terms 'Gene Pool' and 'Gene Frequency'.

Q.II. Answer ANY FOUR of the following:

(4x5= 20)

1. Explain the 'End-Replication Problem' with regard to replication of Telomeres.
2. Write a concise note on 'Transcription' process in Eukaryotes
3. Elaborate on the effect of antibiotics on Protein synthesis.
4. Discuss the principles of Lamarckism. Add a note on Neo-Lamarckism.
5. Elaborate on the Biological species concept with a note on its significance.
6. What are isolating mechanisms? Explain Post- mating mechanisms.

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