

**The University of Burdwan**  
**B.Sc. Semester – VI Examination, 2020**

**Sub.: Biotechnology**

**Paper: DSE 4**

**(IPR)**

**Full Marks: 40**

**Time: 2hrs**

**1. Write short note on any eight (8) of the followings:**

5 X 8=40

- a. Patent filing procedure
- b. Copy right
- c. Trademark
- d. WTO-TRIPS
- e. PCT
- f. Prior Art
- g. Trade Secret
- h. Patent criteria
- i. Geographical Indication
- j. Patent Infringement

(OR)

## Evolutionary Biology

Full Marks: 40

Time: 2 hrs

Q1. Answer *eight* questions from the following:

5x8=40

- a) Briefly explain the Neo-Darwinian theory of evolution?
- b) During chemogenic process, how does protobionts came to exist?
- c) Comment on basis of evolution of prokaryotes into eukaryotes, according to endosymbiotic theory.
- d) Differentiate between homologous and analogous organs with proper examples.
- e) Highlight the impacts of oxygen in evolution of life process.
- f) What is living fossil? Point out the significance of them in evolutionary study?
- g) Explain with example the differences between phylogeny and systematics.
- h) Comment on the problem of biological species concept with reference to potentially inbreeding/hybrid species.
- i) What do you understand by Prezygotic and Postzygotic barriers/isolation in speciation?
- j) Clarify with example the role geographic obstacles during allopatric speciation.