



A Charutar Vidya Mandal's Institution  
**V.P. & R.P.T.P. SCIENCE COLLEGE**  
(AUTONOMOUS) (Grant-in-Aid)  
Affiliated to Sardar Patel University  
VALLABH VIDYANAGAR-388120



**Bachelor of Science (Semester 5) Internal Examination - 2025**  
**US05MAZOO02: Ecology & Animal Behavior**

**Date: 23/09/25**

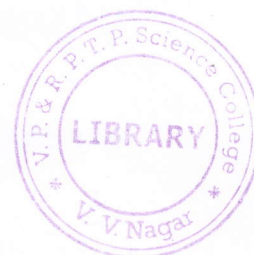
**Time: 10:45 to 12:15**

**Total marks :30**

**Q-1 Multiple choice Questions**

**(6Marks)**

1. **The total number of species present in a community is called:**
  - a) Species richness
  - b) Species dominance
  - c) Species diversity
  - d) Species abundance
2. **Which of the following biodiversity hotspots is present in India?**
  - a) Amazon rainforest
  - b) Indo-Burma region
  - c) Congo basin
  - d) Madagascar island
3. **Acid rain is primarily caused by:**
  - a) CO<sub>2</sub> and CH<sub>4</sub> emissions
  - b) Ozone and CFC accumulation
  - c) SO<sub>2</sub> and NO<sub>x</sub> emissions
  - d) Dust and particulate matter
4. **Which of the following is an example of *intra-sexual selection*?**
  - a) Female choosing brightly colored males
  - b) Male-male rivalry for territory or mate
  - c) Parents investing equally in offspring
  - d) Female providing parental care
5. **Circadian rhythm is approximately how many hours long?**
  - a) 12 hours
  - b) 18 hours
  - c) 24 hours
  - d) 36 hours
6. **Which biological rhythm is synchronized with phases of the moon?**
  - a) Circannual rhythm
  - b) Lunar rhythm
  - c) Tidal rhythm
  - d) Circadian rhythm



P.T.O.

**Q-2 Write a short note on Ecological Niche. (6Marks)**

**OR**

**Q-2 Explain the types of Ecological succession in details. (6Marks)**

**Q-3 Write a short note on Biodiversity Hotspots. (6Marks)**

**OR**

**Q-3 Explain the Importance and loss of Biodiversity in details. (6Marks)**

**Q-4 Write a short note on Skinner box experiment. (6Marks)**

**OR**

**Q-4 Write a short note on Sexual dimorphism. (6Marks)**

**Q-5 Explain the role of Melatonin in details. (6Marks)**

**OR**

**Q-5 Write a short note on Circadian rhythm. (6Marks)**

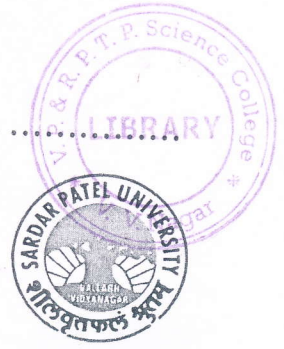
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Supervisor sign .....

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**BSC (Semester 5) Internal Quiz - 2025**  
**US05MAZOO02: Ecology & Animal Behavior**

Date: 23/09/25 Day: TUESDAY

Time: Maximum 20 minutes

Total marks :15

Q-1 Fill in the blanks with appropriate answer given in the bracket. OR Answer with either true or false.

1. The gradual change in community structure over time is called \_\_\_\_\_ (Succession / Stratification).
2. Excess growth of algae in water bodies due to nutrients is called \_\_\_\_\_ (Eutrophication / Acidification).
3. Courtship behavior is important for \_\_\_\_\_ (Mate recognition / Nest building).
4. Female choice among males is called \_\_\_\_\_ (Inter-sexual selection / Intra-sexual selection).
5. Biological clocks are located in the brain region known as \_\_\_\_\_ (SCN / Cerebellum).
6. A cycle that repeats 12.5hrs is called \_\_\_\_\_ (Lunar rhythm / Tidal rhythm).
7. The transitional zone between two ecosystems is called \_\_\_\_\_ (Ecotone / Ecotype).
8. Ozone depletion is caused mainly due to carbon dioxide emissions. (TRUE / FALSE)
9. Biodiversity provides ecosystem services like pollination, nutrient cycling, and soil fertility. (TRUE / FALSE)
10. Courtship behavior in Stickleback fish is primarily visual. (TRUE / FALSE)
11. Sexual dimorphism means males and females are always identical in appearance. (TRUE / FALSE)
12. Circadian rhythms are controlled by both internal clocks and external cues. (TRUE / FALSE)
13. Tidal rhythm is linked to seasonal changes in temperature. (TRUE / FALSE)
14. Edge effect increases species richness at the boundary of two ecosystems. (TRUE / FALSE)
15. Niche overlap always prevents coexistence of species. (TRUE / FALSE)