

Biological Entrepreneurship and Natural Systems

Entrepreneurship · Practice Test · 10 Questions

1. Which social insect species exhibits 'farming' behavior by cultivating specific fungi species within their nests to process cellulose?

- A) Leafcutter ants (*Atta*)
- B) Honey bees (*Apis mellifera*)
- C) Common wasps (*Vespula vulgaris*)
- D) Termites (*Isoptera*)

2. In evolutionary game theory, which strategy involving the 'tit-for-tat' dynamic is observed in cleaner fish (*Labroides dimidiatus*) when they provide services to 'client' reef fish?

- A) Biological market theory
- B) Resource depletion strategy
- C) Parasitic niche exploitation
- D) Commensalistic mimicry

3. What is the term for the 'investment' made by Acacia trees which provide specialized structures called Beltian bodies to *Pseudomyrmex* ants?

- A) Myrmecophytic symbiosis
- B) Resource monopolization
- C) Endosymbiotic mutation
- D) Niche colonization

4. Which marine organism engages in 'kleptoplasty', essentially 'stealing' the chloroplasts from ingested algae to perform photosynthesis as an energy-harvesting business model?

- A) *Elysia chlorotica* (Sea slug)
- B) *Aurelia aurita* (Moon jellyfish)
- C) Clam (*Tridacna gigas*)
- D) Coral (Anthozoa)

5. Beavers act as 'ecosystem engineers' by modifying waterways. What is the primary ecological 'return on investment' they gain from these structural modifications?

- A) Predator avoidance and food storage
- B) Increased metabolic rate
- C) Social status within the colony
- D) Reduction in territorial range

6. Some orchid species (e.g., *Ophrys apifera*) utilize 'sexual deception' to ensure pollination. This is an example of which evolutionary business strategy?

- A) Mimicry-based resource acquisition
- B) Parasitic host exploitation
- C) Mutualistic trade-off
- D) Competitive exclusion

7. In the 'biological market' of the cleaner wrasse, what factor dictates the 'price' of their cleaning service provided to client fish?

- A) The supply and demand of parasites
- B) The geographical location of the reef
- C) The taxonomic order of the client
- D) The water temperature

8. Which animal species is known for 'hoarding' behavior that leads to the unintended 'venture capital' dispersal of tree seeds across large forest ecosystems?

- A) Clark's nutcracker (*Nucifraga columbiana*)
- B) Red fox (*Vulpes vulpes*)
- C) Common raven (*Corvus corax*)
- D) Raccoon (*Procyon lotor*)

9. How do mycorrhizal networks act as a 'subterranean supply chain' between disparate plant species?

- A) By transferring carbon and phosphorus in exchange for sugars
- B) By suppressing all other plant competition
- C) By emitting pheromones to deter herbivores
- D) By storing water for drought cycles

10. What 'startup cost' does the male Bowerbird pay to attract a mate through the construction of elaborate display structures?

- A) High cognitive load and intense territorial maintenance
- B) An increase in metabolic energy expenditure for vocalization
- C) Permanent habitat relocation
- D) Loss of digestive efficiency