

Entrepreneurship and the Natural World

Entrepreneurship · Answer Key · 25 Questions

1. Which social insect species is known for 'scout' behavior, where individuals prospect for new nesting sites and perform a 'waggle dance' to secure consensus, similar to stakeholder buy-in?

A) Honey bees

- B) Common ants
- C) Termites
- D) Paper wasps

2. What concept in nature describes the 'first-mover advantage' where a species occupies a niche before competitors, effectively controlling the available resources in that area?

- A) Mutualism
- B) Ecological succession

C) Niche preemption

- D) Parasitism

3. Beavers act as 'ecosystem engineers' by modifying their environment to create habitats. Which term describes this value-added creation that benefits the wider biodiversity of the area?

A) Keystone species

- B) Resource extraction
- C) Market saturation
- D) Supply chain

4. In the context of 'resource allocation', which animal species practices 'hoarding' by burying thousands of seeds in distinct locations, effectively managing a distributed investment portfolio for winter survival?

A) Eastern grey squirrel

- B) Red fox
- C) Snowshoe hare
- D) Grizzly bear

5. What is the primary 'venture capital' equivalent for a migrating bird species, which must accumulate enough fat reserves (fuel) to successfully reach its destination?

A) Stored lipids

- B) Calcium deposits
- C) Oxygen intake
- D) Feather density

6. In plant biology, what do trees in a forest 'trade' through their interconnected mycorrhizal fungi networks, often referred to as the 'Wood Wide Web'?

A) Carbon and nutrients

- B) Sunlight and oxygen
- C) Pollen and nectar
- D) Water and stones

7. What 'business model' do cleaner wrasse fish employ when they remove parasites from larger fish, receiving food in exchange for the health service provided?

A) Mutualistic symbiosis

- B) Predatory exploitation
- C) Passive scavenging
- D) Vertical integration

8. Which strategy, observed in many species like salmon, involves investing heavily in one massive reproductive event (spawning) rather than smaller, recurring events?

A) Semelparity

- B) Iteroparity
- C) Commensalism
- D) Amensalism

9. When ants 'farm' aphids by protecting them in exchange for honeydew, this is a real-world example of which economic concept?

A) Resource management

- B) Devaluation
- C) Market crashing
- D) Monopoly

10. What is the 'opportunity cost' for a flower that produces nectar, which is a high-energy metabolic investment used to attract pollinators?

A) Reduced energy for seeds

- B) Increased risk of drought
- C) Loss of soil nitrogen
- D) Greater vulnerability to wind

11. In the 'competitive market' of a coral reef, what determines the success of a coral colony's expansion?

A) Access to sunlight and nutrients

- B) Size of the predator population
- C) Speed of ocean currents
- D) Volume of sand deposits

12. How do some species of 'kleptoparasite' birds exhibit a 'theft-based' economic model?

A) Stealing food caught by other birds

- B) Building nests in abandoned burrows
- C) Migrating only in winter
- D) Eating only decaying matter

13. Which animal uses 'divestment' by discarding parts of its body, such as a tail, to ensure its survival when threatened by a predator?

A) Blue-tailed skink

- B) Green sea turtle
- C) Common wombat
- D) Eastern brown snake

14. What biological 'supply chain' process involves termites breaking down cellulose into nutrients for the rest of the colony?

A) Decomposition and nutrient cycling

- B) Nitrogen fixation
- C) Solar energy conversion
- D) Water desalination

15. Which marine animal is known to use 'tools' (such as rocks to crack shells), showing an investment in technology to improve efficiency?

A) Sea otter

- B) Bottlenose dolphin
- C) Giant octopus
- D) Green sea turtle

16. In nature, 'bioaccumulation' refers to the process where toxins increase in concentration as they move up the food chain. Which economic risk does this parallel?

A) Compounding liability

- B) Diversified debt
- C) Asset appreciation
- D) Market liquidity

17. Why do some plants exhibit 'phenotypic plasticity', allowing them to adjust their growth based on the environment, effectively 'pivoting' their business model?

- A) To optimize resource usage**
- B) To change their genetic code
- C) To avoid seasonal migration
- D) To attract specific nocturnal insects

18. What is the 'overhead cost' for a bird species that migrates thousands of miles, requiring massive caloric intake before departure?

- A) Metabolic energy expenditure**
- B) Time spent away from territory
- C) Increased exposure to predators
- D) Loss of nesting materials

19. The strategy of 'bet-hedging' in plants, where seeds germinate at different times rather than all at once, is a safeguard against which environmental risk?

- A) Unpredictable weather patterns**
- B) Competition for pollinators
- C) Overpopulation of the area
- D) Genetic degradation

20. Which animal species is considered an 'early adopter' in the evolutionary sense, rapidly colonizing disturbed habitats after a fire or flood?

- A) Pioneer species**
- B) Apex predators
- C) K-strategists
- D) Deep-sea mollusks

21. How do pack-hunting predators like wolves demonstrate the benefit of 'collaboration' over solitary hunting?

- A) Increased success rate per hunt**
- B) Lower caloric needs per individual
- C) Ability to avoid all weather conditions
- D) Reduction in territorial needs

22. Which economic principle is best represented by the 'tragedy of the commons' in a pond with limited oxygen and many competing fish?

- A) Over-consumption of shared resources**
- B) Inability to migrate
- C) High cost of reproduction
- D) Predatory efficiency

23. What is the 'return on investment' for a deciduous tree that drops its leaves in autumn?

A) Conservation of water and energy

- B) Faster growth in spring
- C) Protection from heavy snow
- D) Access to nutrients from soil

24. Which strategy is used by some fungi to 'monopolize' nutrients in a tree's root system, often to the exclusion of other species?

A) Symbiotic exclusivity

- B) Rapid spore release
- C) Toxic secretion
- D) Large scale root extension

25. What do plants gain through the 'strategic partnership' of pollination with bees?

A) Genetic cross-pollination

- B) Increased water retention
- C) Protection from herbivores
- D) Faster leaf development