Coral Reef Bleaching/Restoration Test

Name: _____Date: _____ Class: _____

Multiple Choice – Select the best answer.

1. What is coral bleaching?
a) Coral growing too quickly
b) Loss of symbiotic zooxanthellae or their pigments
c) Coral changing color during reproduction
d) Coral overgrowing other species

2. Which environmental factor most commonly triggers coral bleaching?
a) Strong currents
b) High levels of calcium
c) Elevated sea surface temperatures
d) Increased salinity

3. What are zooxanthellae?
a) Coral predators
b) A type of algae that live inside coral tissue
c) Tiny worms that clean coral
d) External parasites

4. Why are coral reefs considered "foundation species"?
a) They live on the ocean floor
b) They are predators
c) They support biodiversity by building reef structures
d) They eat plankton

5. What percentage of marine species depend on coral reefs?
a) 10%
b) 25%
c) 50%
d) 75%

6. What role does sunlight play in coral health?
a) Helps them migrate
b) Allows zooxanthellae to photosynthesize
c) Reflects predators
d) Strengthens their shells

7. Which stressor weakens coral skeletons by lowering pH?
a) Solar flares
b) Eutrophication
c) Ocean acidification
d) Sedimentation

8. What happens to corals if bleaching lasts too long?
a) They reproduce faster
b) They develop new pigments
c) They die
d) They change species

9. What type of weather pattern has been linked to global bleaching events?
a) La Niña
b) Typhoons
c) El Niño
d) Droughts

10. What is coral gardening?
a) Removing algae from reefs
b) Feeding corals in tanks
c) Growing coral fragments in nurseries and transplanting them
d) Using coral for landscaping

11. What coral type is most commonly used in coral gardening?
a) Brain coral
b) Mushroom coral
c) Branching corals like *Acropora*
d) Soft corals

12. What is microfragmentation?
a) A bleaching process
b) A pollution mitigation technique
c) Cutting coral into small pieces to promote faster growth
d) Genetic cloning

13. What does larval reseeding involve?
a) Collecting coral larvae and releasing them onto reefs
b) Reseeding seaweed
c) Planting coral seeds
d) Collecting fish eggs

14. Which structure is used in artificial reef creation?
a) Bamboo cages
b) Coral bones
c) Concrete domes or metal frames
d) Driftwood

15. What is one benefit of artificial reef structures?
a) Increase water temperature
b) Attract sharks
c) Provide a base for coral growth
d) Block sunlight

16. What is the goal of assisted evolution in corals?
a) Create new coral colors
b) Increase coral height
c) Breed heat-tolerant strains
d) Remove algae

17. Where is the Coral Restoration Foundation located?
a) Great Barrier Reef
b) Hawaii
c) Florida Keys
d) Bahamas

18. What does the MARRS system use for coral restoration?
a) Floating beds
b) Plastic cages
c) Hexagonal reef stars
d) Wooden stakes

19. Coral Vita is notable for using:
a) Natural reefs only
b) Open-ocean nurseries
c) Microfragmentation and assisted evolution
d) Shipwrecks as habitats

20. What is the goal of the Reef Resilience Network?
a) Building boats
b) Enhancing tourism
c) Disease resistance and community engagement
d) Restocking fish

21. What is one focus of the Great Barrier Reef's RRAP program?
a) Removing reefs
b) Banning tourism
c) Genetic approaches and cloud brightening
d) Overfishing incentives

22. What ecological benefit does coral restoration provide?
a) Increased sediment
b) Habitat for invasive species
c) Enhanced biodiversity
d) Decreased algae

23. Which is a socio-economic goal of coral restoration?
a) Increase oil drilling
b) Promote shipping routes
c) Support sustainable tourism and fisheries
d) Limit education

24. What metric is used to evaluate restoration success?
a) Coral pigment variety
b) Algae presence
c) Coral survival and fish biomass
d) Number of tourists

25. What is a major challenge to scaling coral restoration?
a) Lack of interest
b) Weak coral species
c) Funding and coordination
d) Too many volunteers

26. How can climate change undo coral restoration work?
a) By decreasing fish numbers
b) Through repeated marine heatwaves
c) By cooling the oceans
d) By changing tides

27. What is a risk of genetic engineering in reef restoration?
a) Coral grows too slowly
b) Increased algae
c) Ethical concerns
d) Water becomes clearer

28. Why is reducing emissions essential for reef survival?
a) Increases algae growth
b) Slows coral feeding
c) Reduces ocean heat stress
d) Prevents overfishing

29. What is the ideal long-term goal for coral reef protection?
a) More artificial reefs
b) Eliminate coral bleaching entirely
c) Combine restoration with reducing global stressors
d) Move corals to colder waters

30. Which of the following is NOT a coral bleaching stressor?
a) Light stress
b) Overfishing
c) Disease
d) Earthquakes

31. What is a potential downside of only focusing on restoration?
a) It's cheap and easy
b) It replaces all other conservation work
c) It doesn't solve the root causes like emissions
d) It protects only one species

32. How does coral bleaching affect tourism?
a) Attracts more divers
b) Has no impact
c) Decreases reef beauty and income
d) Increases fishing

33. Coral bleaching causes corals to appear:
a) Dark brown
b) Bright white
c) Greenish blue
d) Covered in moss

Answer Key

1. b
2. c
3. b
4. c
5. b
6. b
7. c
8. c
9. c
10. c
11. c
12. c
13. a
14. c
15. c
16. c
17. c
18. c
19. c

20. c

21. c

22. c

23. c

24. c

25. c

26. b

27. c

28. c

29. c

30. d

31. c

32. c

33. b