

Name: _____

Period: ____ Date: _____

TEST REVIEW / STUDY GUIDE: WAVES, TIDES, CURRENTS & HURRICANES

1. Draw an **ideal wave** below and label: *crest, trough, wavelength, wave height*

2. Define:

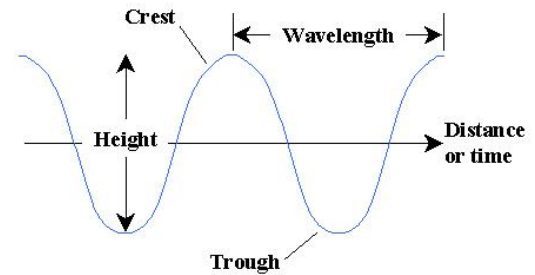
Wave period: _____

Wave speed: _____

Wave height: _____

Wavelength: _____

Wave Frequency: _____



1. What **3 things** determine the **size of wind generated waves**?

2. **How** does water move in a wave?

3. What happens to wave motion as you go deeper? Where do you stop feeling the motion of a wave?

4. What happens to waves in shallow water? Explain how a wave “crashes” on shore.

5. How do waves impact the coast?

6. How are waves important to organisms in the ocean? Give two reasons.

7. Rogue Waves

a. Causes:

b. Where they occur:

c. Frequency:

Name: _____

Period: ____ Date: _____

8. Tsunamis

- a. Causes:
- b. Description at sea:
- c. Description as it comes ashore:
- d. Warning signs:

9. What are **tides**?

10. How are tides produced? Be specific in your answer (*mention sun, moon and Earth*).



11. What is tidal range?

12. Compare spring tide and neap tide (fill in table below):

	Spring Tides	Neap Tides
Tidal Range		
Moon Phases		
Diagram		

13. What are semi-diurnal tides?

14. What is the length of a **lunar day**? _____

15. How often does the moon orbit the Earth? _____

16. Tides are very long, slow waves. What is the wave period of tides (how long between two tides)?

17. What is a current? What causes currents?

18. What are the 3 main winds across the surface of the globe? Where are each located? Are they continuous or not?

Name: _____

Period: ____ Date: _____

19. Define the following terms:

- **Gyre:**
- **Down-welling:**
- **Up-welling:**

20. What is a **benefit** of down-welling? Of up-welling?

21. How does the **Coriolis Effect** move water in N. hemisphere? _____; in the S. Hemisphere? _____

22. What are the 2 main currents off of the coasts of North America? Which way does each flow? What temperature water does each carry?

23. Which layer of the ocean has the most drastic temperature change?

24. What is thermohaline circulation? Does this relate to surface currents *or* deep water currents?

25. What is one **main difference** between surface and deep water currents?

26. What is a hurricane?

27. Explain how hurricanes form (include information about *water temperature* and the *thermocline*).

28. Define the following parts of a hurricane:

- **Eye:**
- **Eye Wall:**
- **Rain bands:**

Name: _____

Period: ____ Date: _____

29. How many categories are there for hurricanes? What is the name of the scale used to classify them?

30. Which types of marine organisms are most affected by a hurricane? Why?

31. Which marine organisms may benefit from a hurricane? How?

32. How has hurricane activity changed over the past century?