Physical Geology
Shorelines

Multiple Guess: (You know the drill – 2 points each)

1. The path of movement of a water particle in a wave at sea is 1. circular 2. horizontal 3. vertical 4. elliptical 5. none of these answers

2. Waves of oscillation transport 1. water 2. energy 3. floating matter 4. sediment 5. All of the above

3. Which of the following statements is NOT a true description of ocean waves? 1. Waves originate by the frictional action of wind on water. 2. Energy is imparted to waves by winds. 3. Water particles in waves move along at the same velocity as the wave. 4. Wave height is the vertical distance between crest and trough. 5. Wave refraction causes irregular distribution of energy along the coast.

4. When waves reach shallow water they become 1. shorter and higher 2. longer and lower 3. longer and higher 4. shorter and lower 5. remain unchanged in form

5. On an irregular shoreline, the energy of a wave is 1. concentrated mostly on the headlands by wave refraction 2. dissipated at the line where the wave first "feels bottom" 3. evenly spread over the entire shoreline 4. usually completely dissipated before reaching the shore 5. concentrated along the beaches by wave refraction

6. Which of the following conditions would generate a longshore current? 1. rip currents 2. a tsunami 3. waves parallel to the shore 4. a spring tide 5. waves striking the beach at an oblique angle

7. Which of the following is the most likely trend in the evolution of coastal features? 1. sea arch, sea stack, sea cliff, sea cave 2. sea cliff, sea arch, sea cave, sea stack 3. sea cliff, sea cave, sea arch, sea stack 4. sea stack, sea cave, sea arch, sea cliff 5. sea cave, sea arch, sea stack, sea cliff

8. Which of the following is NOT a depositional feature? 1. sea stack 2. baymouth bar 3. tombolo 4. beach 5. barrier island

10. The single major source of beach sediments in most regions is 1. offshore bars 2. rivers 3. wind blowing sand from beach 4. the continental shelf 5. wave erosion of the coast

NAME _____

/50

1. 1 2 3 4 5

2. 1 2 3 4 5

3. 1 2 3 4 5

4. 1 2 3 4 5

5. 1 2 3 4 5

6. 1 2 3 4 5

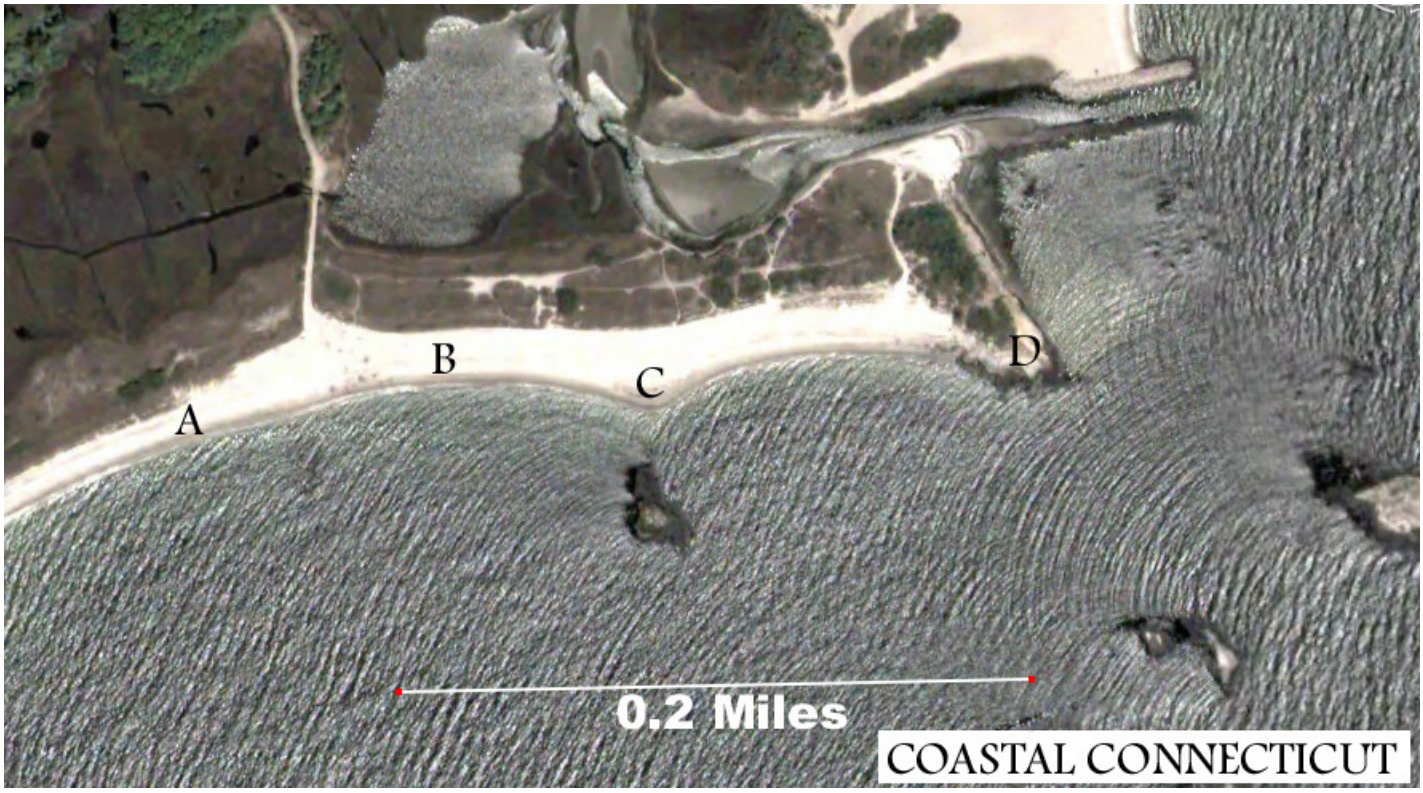
7. 1 2 3 4 5

8. 1 2 3 4 5

9. 1 2 3 4 5

10. 1 2 3 4 5

Base your answers to the following questions on the photos below (and available on the web). Write / draw your answers on the pictures, or in the spaces provided next to the questions.



11 – 13 Coastal Connecticut

11. On the map, draw with lines with arrows the path an individual grain of beach sand would follow between points A and B. (2)

12. What geologic process dominates the beach at point C? _____(2) EXPLAIN (you may illustrate your answer on the photo, too)(2)

_____

_____

_____

_____

13. What is the fate of the headland at D, and why do you think that? (you may illustrate your answer on the photo, too)(2) and (2)

_____

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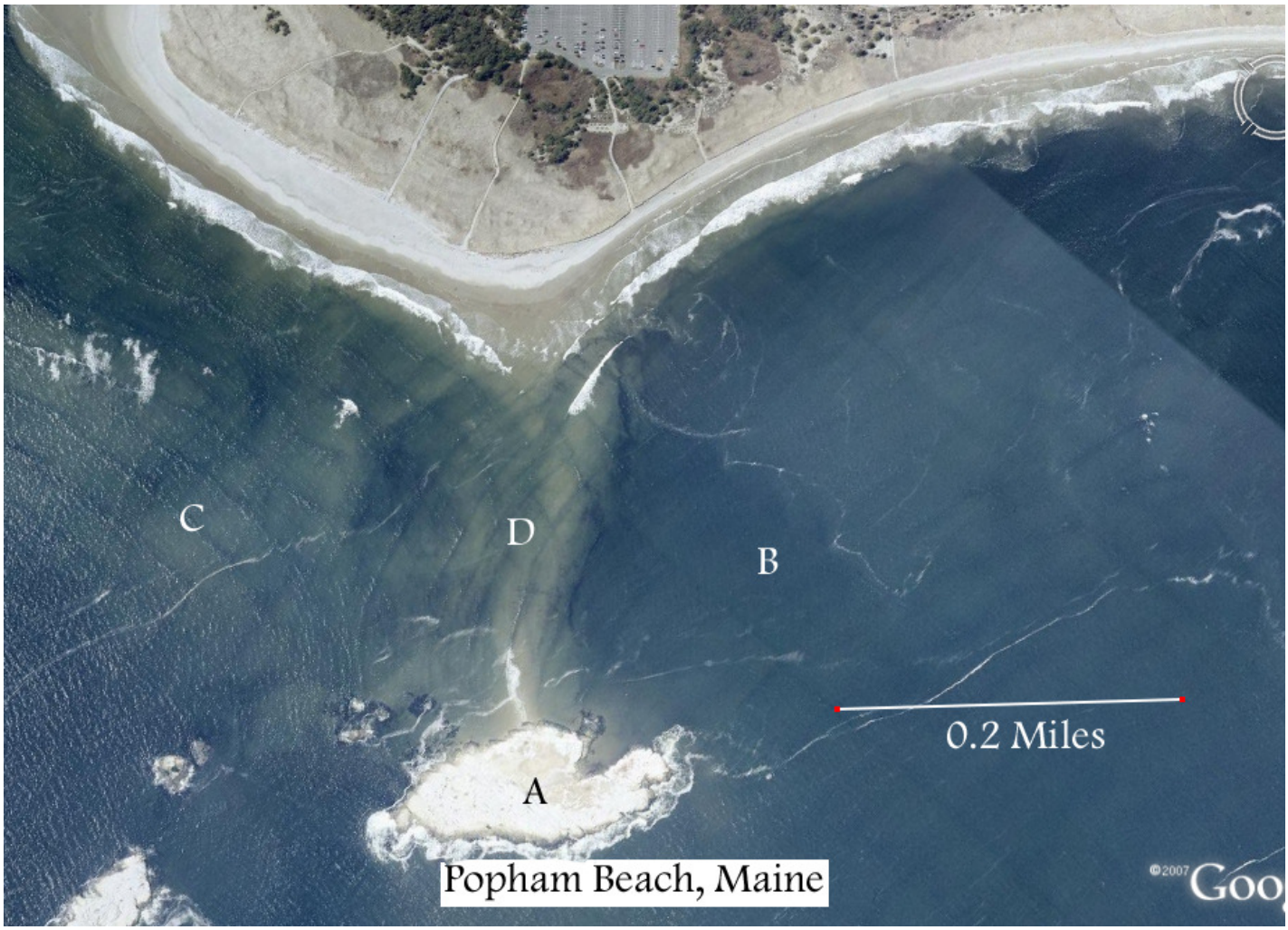
Name _____



14 – 17 Popham Beach, Maine

14. What term describes the landform at A? _____(2)

15. On the map, draw 3 arrows near point C and 3 arrows near B indicating the direction the wave fronts at each location are moving. (4)

16. What is the term that best describes the coastal landform that is forming at D? (2) _____

17. Why is the landform at D forming? (2) _____

_____

_____

Name _____

18 – 19 The Jersey Shore

18. Draw an arrow on the beach near A indicating the general direction of beach drift in this area (2)

19. What is the term that best describes the coastal landform pictured here? (2)

_____

Name _____

20 – 22 Ocean City, Maryland.

20. Why is the beach wider at C than at A? (2) _____

_____

_____

21. Why is the beach wider at B than at A? (2) _____

_____

_____

22. Explain why the barrier island at C is offset shoreward from the barrier island at B and A. (2)

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Name _____