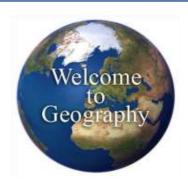


Montgomery Academy Geography Dept.



Name:	
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Previous Score: _____/100 New Score: _____/100



Coastal Environments

Multiple choice knowledge checker

1.	Wh	What causes waves?	
0	A.	Tides	
0	В.	Wind	
0	C.	Rain	
0	D.	Plate tectonics	

2.	What influences the size and energy of a wave?		
0	A.	The strength of the wind	
0	В.	Length of time the wind has been blowing	
0	C.	The strength of the wind and how long wind has been blowing	

3.	tra sea	ne or false? Waves are caused by the nsfer of energy from the wind to the due to friction of the wind on the face of the water.
0	A.	True
0	В.	False

4.	What is the top of a wave called?	
0	A.	Crest
0	B.	Trough
0	C.	Frictional drag
0	D.	Wave tilt

5.	What is the base of a wave called?	
0	A.	Crest
0	В.	Trough
0	C.	Frictional drag
0	D.	Wave tilt

6.	What is wave frequency?		
0	A.	The distance a wave travels	
0	В.	The length of a wave	
0	C.	The height of a wave	
	2	The number of waves breaking per	
	D.	minute	

7.	What is the fetch of a wave?		
0	A.	The distance a wave travels	
0	В.	The length of a wave	
0	C.	The height of a wave	
	7	The number of waves breaking per	
	υ.	minute	

8.	mo ciro wa	le or false? In deep water, water lecules within a wave move in a cular motion. It is only in shallow ter that the water itself is moving ward.
0	A.	True
0	В.	False

9.	Why are some waves stronger than others?	
0	A.	They have a long fetch and strong winds have been blowing over them for a long time.
0	В.	They have a short fetch and strong winds have been blowing over them for a long time.
0	C.	A full moon and long fetch
0	D.	A full moon and short fetch

10.	What is it called when a wave breaks on a beach and washes up it?	
0	A.	Backwash
0	В.	Swash
0	C.	Crest
0	D.	Trough

11.	A wave rushing back down a beach towards the sea is called:	
0	A.	Backwash
0	B.	Swash
0	C.	Crest
0	D.	Trough

12.	What causes a wave to slow as it approaches a beach?	
0	A.	Swash
0	В.	Backwash
0	c.	Functional drag
0	D.	Friction on the seabed

13.	What are the characteristics of a		
13.	constructive wave?		
0	Α.	The swash is stronger than the	
		backwash. The wave height is high.	
0	В.	The backwash is stronger than the	
		swash. The wave height is high.	
0	C.	The swash is stronger than the	
		backwash. The wave height is low.	
	D.	The backwash is stronger than the	
		backwash. The wave height is low.	

14.		nat are the characteristics of a	
	destructive wave?		
0	Α.	The swash is stronger than the	
		backwash. The wave height is high.	
0	В.	The backwash is stronger than the	
		swash. The wave height is high.	
0	C.	The swash is stronger than the	
		backwash. The wave height is low.	
0	D.	The backwash is stronger than the	
		backwash. The wave height is low.	

15.	Where are constructive waves typically found?	
0	A.	Sheltered bays
0	В.	Exposed headlands
0	C.	Exposed based
0	D.	Sheltered headlands

16.	What is the typical frequency of constructive waves?	
0	A.	4-6 waves per minute
0	В.	8-10 waves per minute
0	C.	12-14 waves per minute
0	D.	16-18 waves per minute

17.	What is the typical frequency of constructive waves?	
0	A.	2-6 waves per minute
0	В.	6-10 waves per minute
0	C.	10-14 waves per minute
0	D.	14-18 waves per minute

18.	Which type of waves build beaches?	
0	A.	Destructive waves
0	В.	Constructive waves

19.	What happens to a beach when a wave's backwash is stronger than its swash?	
0	A.	The beach is eroded
0	B.	The beach builds up

20.	What is weathering?		
0	Α.	The breaking down of rock in situ.	
0	В.	The wearing away of land by the sea.	
0	_	The transportation of material by the	
	ز	sea.	
0	2	The deposition of material by the	
	υ.	sea.	

21.	Which type of weathering involves rainwater dissolving rock?	
0	A.	Freeze-thaw weathering
0	В.	Biological weathering
0	C.	Salt weathering
0	D.	Chemical weathering

22.	inv rea lim bic	lat type of chemical weathering olves carbonic acid in rainwater cting with calcium carbonate in estone to form soluble calcium arbonate that can be carried away in ution?
0	Α.	Carbonation
0	В.	Hydrolysis
0	C.	Oxidation

23.	inv (br	le or false? Mechanical weathering olves rocks being disintegrated oken) and is usually associated with remes of temperature?
0	A.	True
0	В.	False

24.	What is mass movement?		
0	^	The down-slope movement of rock,	
	A.	soil or mud under gravity.	
	В.	The removal of beach sediment from	
		a beach by waves.	
	(The transportation of material along	
	ز	the coast by the sea.	
0	D.	The deposition of material by the	
		sea.	

25.	Which of the following are examples of		
	mass movement?		
0	۸	Rockfall, landside, mudslide and	
	Α.	slumping	
0	В.	Rockfall, landslide, mechanical	
		weathering and slumping	
0	C.	Rockfall, chemical weathering,	
	С.	mudslide and slumping	
		Rockfall, landslide, mudslide and	
	D.	slumping	

26.	Which type of mass movement features a curved slip plane?	
0	A.	Rockfall
0	В.	Landslide
0	C.	Mudslide
0	D.	Slumping

27.	ind	ie or false? A landslide involves ividual rocks losing contact with the face, often as the result of freezeww.
0	A.	True
0	В.	False

28.	True or false? Weathering can cause cliff instability, leading to mass movement	
0	A.	True
0	В.	False

29.	What is coastal erosion?		
0	Α.	The wearing away and removal of	
	A.	material by waves.	
0	0	The transportation of material by the	
	В.	sea.	
0	(The deposition of material by the	
	C.	sea.	
0	D.	All of the above	

30.	Under which of the following conditions		
	WII	I the rate of erosion be higher?	
		Coastlines exposed to a small fetch,	
	Α.	strong winds, there are soft rocks,	
	Λ.	the rock has many joints and a	
		coastline with no beach.	
		Coastlines exposed to a large fetch,	
0	В.	strong winds and a coastline with a	
		large beach	
	C.	Coastlines exposed to a large fetch,	
0		strong winds and a coastline with no	
		beach.	
		Coastlines exposed to a large fetch,	
0	D.	gentle winds and a coastline with no	
		beach.	

31.	Identify the main types of coastal		
31.	erosion.		
0	Α.	Hydraulic action, abrasion, attrition	
	Α.	and solution.	
	В	Corrasion, abrasion, attrition and	
	В.	sublimation.	
0	C.	Longshore drift, abrasion, attrition	
	C.	and solution.	
	7	Deposition, abrasion, attrition and	
	D.	solution.	

32.	Which type of erosion involves destructive waves pick up beach material (e.g. pebbles) and hurl them at the base of a cliff.	
0	A.	Attrition
0	В.	Abrasion
0	C.	Hydraulic Action
0	D.	Solution

33.	Which type of erosion involves waves hitting the base of a cliff leads to air compression in cracks, joints and folds in bedding planes causing repeated changes in air pressure. As air rushes out of the cliff when the wave retreats it leads to an explosive effect as pressure is released.	
1		
0	A.	Attrition
0	A. B.	Attrition Abrasion
		7 100 100 1

34.	Which type of erosion involves certain types of cliff eroding as the result of weak acids in the sea.	
0	A.	Attrition
0	В.	Abrasion
0	C.	Hydraulic Action
0	D.	Solution

35.	Which type of erosion involves waves causing rocks and pebbles to bump into each other and break up.	
0	A.	Attrition
0	В.	Abrasion
0	C.	Hydraulic Action
0	D.	Solution

36.	Where does most marine load originate from?		
0	A.	River deposits	
0	В.	Eroded headlands	
0	C.	The seabed	
0	D.	D. All the above	

37.	Which type of coastal transportation involves beach material being bounced along the seafloor?	
0	A.	Traction
0	В.	Saltation
0	C.	Suspension

0	D.	Solution	
38.		nich type of coastal transportation olves beach material being carried in	
30.		the water by the waves?	
0	A.	Traction	
0	В.	Saltation	
0	C.	Suspension	
0	D.	Solution	

39.	Which type of coastal transportation involves large pebbles and boulders being rolled along the seafloor?	
0	A.	Traction
0	В.	Saltation
0	C.	Suspension
0	D.	Solution

40.	tra	ne or false? The zig-zag movement of nsported material along the coast is own as longshore drift.
0	A.	True
0	В.	False

41.	dri	True or false? The direction of longshore drift is determined by the prevailing wind.	
0	A.	True	
0	В.	False	

42.	What is coastal deposition?		
0	Α.	The wearing away of the land by the	
		sea.	
0	В.	The transportation of material along	
		the coast.	
0	C.	When waves drop and leave behind	
		the load they were transporting.	

43.	Coastal deposition occurs under which of the following conditions? (you can select more than one)	
0	A.	When waves enter an area of shallow water.
0	В.	When waves enter a sheltered area, e.g. a cove or bay.
0	C.	When there is little wind.
0	D.	When a river or estuary flows into the sea reducing wave energy.

44.	Wh	What is a discordant coastline?	
		A coastline where alternating layers	
0	Α.	of hard and soft rock run parallel to	
		the shore.	
		A coastline where alternating layers	
0	В.	of hard and soft rock run at right	
		angles to the shore.	

45.	Wh	What is a headland?	
		A cliff that juts out into the sea that	
0	A.	is surrounded by water on three	
		sides.	
0	В.	A crescent shaped indentation in the	
		coastline.	

46.	Why is wave energy concentrated on a headland?	
0	A.	Wave deflection
0	В.	Wave reflection
0	C.	Wave refraction
0	D.	Wave connection

47.	What is a wave cut platform?		
0	Α.	A pillar of rock detached from a	
		headland.	
0	0	A horizontal area of bed rock visible	
	В.	at the base of a cliff.	
0	C.	A natural arch formed in a headland.	
0	D.	A notch in the base of a cliff.	

48.	Which of the following are characteristics of a wave cut platform?	
0	A.	Covered in grass
0	В.	Rock covered at high tide and
		exposed at low tide.
0	C.	Causes cliff collapse
0	D.	Vertical rock

49.	Identify the correct sequence in the formation of a stack	
0	A.	Crack → arch → cave → stack
0	В.	Crack → cave → stack → arch
0	C.	Crack → cave → arch → stack
0	D.	Stump \rightarrow cave \rightarrow arch \rightarrow stack

50.	Which of the following is a characteristic of a sea arch?	
0	۸	Waves erode at the base making it
	Α.	wider.
0	В.	Detached blocks or pillars of rock located off a headland.
		located off a headland.
0	C.	The base of a collapsed stack.

51.	Which of the following is a characteristic of a sea stack?	
0	Α.	Wave cut notches at the base
	Α.	making it wider.
0	B.	Detached blocks or pillars of rock located off a headland.
	Б.	located off a headland.
0	C.	The base of a collapsed stack.

52.	Which of the following are typical characteristics of pebble beaches?	
0	A.	Generally steep
0	В.	Dominant waves are constructive
0	C.	Storm beach with large pebbles

53.	Which of the following are typical characteristics of sandy beaches?		
0	A.	Generally steep	
0	В.	Dominant waves are constructive	
0	C.	Sometimes have sand dunes at the back of the beach	
		pack of the beach	

54.	What is a beach profile?		
0	A.	The gradient of a cliff.	
0	В.	The gradient from the back of the	
		beach to the sea.	
0	C.	The gradient of a series of sand	
		dunes.	

55.	What is a terrace on a beach, formed in the backshore above the water level at high tide known as?	
0	A.	Ridge
0	В.	Off-shore bar
0	C.	Berm

56.	What are large heaps of sand that form on the dry backshore of a sandy beach known as?	
0	A.	Spits
0	В.	Berms
0	C.	Ridges
0	D.	Sand dunes

57.	Which of the following are required for a sand dune to form? (you can select more than one)	
0	A.	A large flat beach
0	В.	A large supply of sand
0	C.	Animal habitats
0	D.	An obstacle for the dune to form against?

58.	Tru dui inci and	e or false? As you move inland sand nes grow taller, vegetation size reases, the dunes become greyer, I slacks become deeper.
0	A.	True
0	В.	False

59.	What is the name of a trough separating two sand dunes?	
0	A.	Slack
0	В.	Smack
0	C.	Track
0	D.	Pack

60.	Identify the term used to describe the change in vegetation with increased distance inland along several lines of dunes.	
0	A.	Vegetation successful
0	В.	Vegetation succession
0	C.	Pioneer plants
0	D.	Vegetation migration

61.	What is the name of a sand or shingle beach that stretches from one side of a bay to another?	
0	A.	Bar
0	В.	Bay bar
0	C.	Off-shore barrier island
0	D.	Spit

62.	bea	What is the name of a sand or shingle beach that that joins the mainland juts out into the sea?	
0	A.	Bar	
0	В.	Beach	
0	C.	Off-shore barrier island	
0	D.	Spit	

63.	True or false? Longshore drift is responsible for forming spits and bars.	
0	A.	True
0	В.	False

64.	What is hard engineering?		
0	Α.	Expensive artificial structures are	
		used to protect the coast.	
0	В.	Working with nature to protect the	
		coast.	

65.	Which of the following is not an example of hard engineering?	
0	A.	Gabions
0	В.	Rock armour
0	C.	Beach reprofiling
0	D.	Groynes

66.	Wh	What is a sea wall?	
		A barrier between waves and the	
0	A.	land. They are sometimes recurved	
		to deflect the energy of waves.	
0	В.	A wooden or stone structure built at	
		right angles to the coast.	
	C.	Tonnes of huge boulders to act as a	
0		barrier between the sea and the	
		land.	
	D.	Steel wire mesh cages filled with	
		pebbles or rocks. They are placed at	
		the back of a sand beach to create a	
		wall like structure.	

67.	Wh	What is a gabion?	
		A barrier between waves and the	
0	A.	land. They are sometimes recurved	
		to deflect the energy of waves.	
	В.	A wooden or stone structure built at	
	ь.	right angles to the coast.	
		Tonnes of huge boulders to act as a	
0	C.	barrier between the sea and the	
		land.	
		Steel wire mesh cages filled with	
	D.	pebbles or rocks. They are placed at	
		the back of a sand beach to create a	
		wall like structure.	

68.	Wh	What is a groyne?	
		A barrier between waves and the	
0	A.	land. They are sometimes recurved	
		to deflect the energy of waves.	
0	В.	A wooden or stone structure built at	
		right angles to the coast.	
		Tonnes of huge boulders to act as a	
0	C.	barrier between the sea and the	
		land.	
	D.	Steel wire mesh cages filled with	
0		pebbles or rocks. They are placed at	
		the back of a sand beach to create a	
		wall like structure.	

69.	What is rock armour?	
		A barrier between waves and the
0	A.	land. They are sometimes recurved
		to deflect the energy of waves.
0	В.	A wooden or stone structure built at
		right angles to the coast.
		Tonnes of huge boulders to act as a
0	C.	barrier between the sea and the
		land.
	D.	Steel wire mesh cages filled with
0		pebbles or rocks. They are placed at
		the back of a sand beach to create a
		wall like structure.

70.	A sea wall gives people a sense of security from coastal erosion. What type of benefit is this?	
0	A.	Social
0	В.	Economic
0	C.	Environmental

71.	A sea wall is unattractive and can damage habitats. What type of disadvantage is this?	
0	A.	Social
0	В.	Economic
0	C.	Environmental

72.	Rock armour is relatively cheap at a cost of between £1000 and £3000 a metre. What type of benefit is this?	
0	A.	Social
0	В.	Economic
0	C.	Environmental

73.	Rock armour can make access to a beach difficult. What type of disadvantage is this?	
0	A.	Social
0	В.	Economic
0	C.	Environmental

74.	Gabions blend in better than other hard engineering solutions. What type of benefit is this?	
0	A.	Social
0	В.	Economic
0	C.	Environmental

75.	Regular maintenance of gabions is required as they quickly degrade. What type of disadvantage is this?	
0	A.	Social
0	В.	Economic
0	C.	Environmental

76.	Why might groynes cause problems?		
		They starve the beaches further	
0	Α.	down the coast, causing more	
		erosion	
	В.	They stop tourists accessing the	
		beach	
0	C.	They are really expensive	

77.	Which of the following is not an example of soft engineering?	
0	A.	Beach nourishment
0	В.	Sand dune regeneration
0	C.	Beach reprofiling
0	D.	Groynes

78.	What is a beach nourishment?		
		The removal of sand from a down-	
0	Α.	drift area which is accumulating	
		sand and returning it up drift.	
	В.	The artificial re-shaping of a beach	
		using existing beach material	
	C.	The artificial creation of sand dunes	
		or restoration of existing dunes.	
		Sediment is taken from the seabed	
0	D.	and placed on a beach that is losing	
		sand.	

79.	What is a beach reprofiling?		
		The removal of sand from a down-	
0	A.	drift area which is accumulating	
		sand and returning it up drift.	
0	В.	The artificial re-shaping of a beach	
	Б.	using existing beach material	
0	(The artificial creation of sand dunes	
	C.	or restoration of existing dunes.	
		Sediment is taken from a bay and	
0	D.	placed on a beach that is losing	
		sand.	

80.	What is a sand dune regeneration?		
		The removal of sand from a down-	
0	A.	drift area which is accumulating	
		sand and returning it up drift.	
0	В.	The artificial re-shaping of a beach	
	В.	using existing beach material	
0	C.	The artificial creation of sand dunes	
	C.	or restoration of existing dunes.	
		Sediment is taken from a bay and	
0	D.	placed on a beach that is losing	
		sand.	

81.	Following beach nourishment, a wider beach means more room for users. What type of benefit is this?	
0	A.	Social
0	В.	Economic
0	C.	Environmental

82.	During beach nourishment access to the beach is restricted for several weeks. What type of disadvantage is this?	
0	A.	Social
0	В.	Economic
0	C.	Environmental

83.	Beach reprofiling can result in a beach looking reasonably natural. What type of benefit is this?	
0	A.	Social
0	В.	Economic
0	C.	Environmental

84.	Beach profiling can be very expensive. What type of disadvantage is this?		
0	A.	Social	
0	В.	Economic	
0	C.	Environmental	

85.	Small planting projects to regenerate sand dunes often uses volunteer labour to keep costs down. What type of benefit is this?	
0	A.	Social
0	В.	Economic
0	C.	Environmental

86.	Sand dunes are always changing. Once regenerated they may still be damaged by storms. What type of disadvantage is this?	
0	A.	Social
0	В.	Economic
0	C.	Environmental

87.	Creating an engineered new position of a coastline is known as what?	
0	A.	Coastal realignment
0	В.	Beach reprofiling
0	C.	Coastal engineering

88.	What is managed retreat?		
	A.	When the decision is made to no	
		longer follow a hold the line strategy	
		for managing coastal erosion and	
		flooding.	
	В.	When the decision is made to	
0		protect an area of land that was	
		previously unprotected.	
0	C.	When the decision is made to	
		upgrade coastal defences at a	
		particular location.	

89.	Which of the following is a social benefit of managed retreat?		
0	A.	It may help take the pressure off areas further along the coast and reduce their risk of flooding.	
0	В.	It is useful cheaper in the long term rather than maintain hard engineering defences.	
0	C.	It is designed to conserve or enhance the natural environment.	

90.	Which of the following is an environmental benefit of managed retreat?		
		It may help take the pressure off	
0	A.	areas further along the coast and	
		reduce their risk of flooding.	
		It is useful cheaper in the long term	
0	B.	rather than maintain hard	
		engineering defences.	
0	C.	It is designed to conserve or	
		enhance the natural environment.	

91.	Which of the following is an economic benefit of managed retreat?		
		It may help take the pressure off	
0	A.	areas further along the coast and	
		reduce their risk of flooding.	
		It is useful cheaper in the long term	
0	В.	rather than maintain hard	
		engineering defences.	
0	C.	It is designed to conserve or enhance	
		the natural environment.	

92.	Which of the following is a social cost of managed retreat?		
0	A.	Short-term costs may be very high.	
0	В.	Relocation of people to new homes	
		causes disruption and distress	
0	C.	Large areas of agricultural land are	
		lost. Also, habitats of coastal birds	
		will be affected.	

93.	Which of the following is an environmental benefit of managed retreat?	
0	A.	Short-term costs may be very high.
0	В.	Relocation of people to new homes causes disruption and distress
0	C.	Large areas of agricultural land are lost. Also, habitats of coastal birds will be affected.