

DEPARTMENT OF GEOGRAPHY

Estuarine Geography 327

Mid Term-Form III-03

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NAME: _____

1. An estuary is _____
 - a. semi enclosed
 - b. coastal body of water
 - c. diluted by freshwater
 - d. both a. & b.
 - e. all of these

2. Variations in the estuary may be caused by _____
 - a. tides
 - b. river drainage
 - c. ground water seepage
 - d. coreolis effect
 - e. all of these.

3. Many organisms spend all or a part of their lifetime in the estuary.
 - a. **TRUE**
 - b. **FALSE**

4. Poor estuarine circulation may lead to eutrophication.
 - a. **TRUE**
 - b. **FALSE**

5. Shallow estuaries have low gradients, little erosion and are less than 3 meters deep.
 - a. **TRUE**
 - b. **FALSE**

6. Deep estuaries are over 1000 meters deep.
 - a. **TRUE**
 - b. **FALSE**

- MATCH (7-13)
 7. Sea grass
 8. Manatee
 9. barnacle
 10. rock weeds
 11. snails
 12. green crabs
 13. eel
 - a. plant
 - b. animal
 - c. nekton
 - d. algae
 - e. mammal

14. The abiotic forms of the estuary are constrained by biotic factors.
 - a. **TRUE**
 - b. **FALSE**

15. Beach berms are caused by wave action.
 - a. **TRUE**
 - b. **FALSE**

16. Strand line flotsam and jetsam may be found in berms

a. TRUE

b. FALSE

MATCH (17-23)

- | | |
|-------------------------------------|-----------------------|
| 17. Inundated spartina alterniflora | a. North River |
| 18. Upriver spartina paten | b. Barataria Bay |
| 19. Indian Head and Herring River | c. Laguna de Temminos |
| 20. Mangroves and Spartina Patens | |
| 21. Red and black mangroves | |
| 22. Low salinity - spartina patens | |
| 23. Turtle grass in clear water | |

24. As you go from a barrier island to a river you find intertidal mussel and clambeds, low energy epi fauna and narrow sandy beaches.

a. TRUE

b. FALSE

25. Cross sections of riverine salt marshes show verticle zonation.

a. TRUE

b. FALSE

26. The most basic food web is zoo plankton.

a. TRUE

b. FALSE

27. Which is not a true statement. As you move from fresh water to the sea _____.

- a. salinity increases
- b. salinity increases with depth
- c. fresh water mixes with salt
- d. both a & b
- e. both a & c

28. According to Fairbridge the energy source of an estuary is concerned with:
Currents and moving water.

a. TRUE

b. FALSE

29. According to Fairbridge the energy source of an estuary is concerned with:

- _____.
- a. currents
 - b. sunlight
 - c. organic and inorganic material
 - d. all except c
 - e. a, b & c

30. Which is not a primary element for most plan life:

- a. C
- b. O
- c. H
- d. P
- e. Si

31. C,H,D. and N may be derived from the atmosphere.

a. TRUE

b. FALSE

32. H⁺ Cation as _____ ; Anion
a. Na⁺
b. Cl⁻
c. Ca²⁺
d. Mg²⁺ & K⁺

33. Sulfur is used to link complex proteins

a. TRUE

b. FALSE

34. Phosphate is important in protein synthesis and as a plant fertilizer.

a. TRUE

b. FALSE

35. Mangroves and salt marsh grasses are found in temperate wetlands.

a. TRUE

b. FALSE

MATCH (36-45)

- | | |
|---|----------------------|
| 36. Dense and robust | a. temperate wetland |
| 37. mainly spartina alterniflora | b. boreal wetland |
| 38. longest season | c. tropical wetland |
| 39. absent on the South American Coast | |
| 40. low lying little temperature change | |
| 41. loose wet soil | |
| 42. Red, black and white | |
| 43. Dark green and light green | |
| 44. Salicornia or glasswort association | |
| 45. Hummock and scrub | |

46. Vegetation fringing streams are taller and more robust and have much hydrogen sulfide.

a. TRUE

b. FALSE

MATCH (47-54)

- | | |
|-----------------------------|---------------------|
| 47. rainfall | a. local |
| 48. temperature | b. latitudinal |
| 49. snow | c. coastal drainage |
| 50. salinity | d. geographical |
| 51. landforms | e. biomass |
| 52. tidal influence | |
| 53. tidal creek | |
| 54. world wide distribution | |

55. Two primary factors of geographical location and latitudinal controls are Solar radiation and temperature.

a. TRUE

b. FALSE

73. If wave energy decreases and river sediment increases-then a lagoon may become a delta.

a. **TRUE**

b. **FALSE**

MATCH (75-84)

75. 80-90% glacial effect

a. tidal river zone

76. physical

b. near shore zone

77. chemical

c. mixing zone

78. biota

d. northeast coast

79. tidal ebb and flow oceanic

e. neutral estuary

80. tidal ebb and low salinity

81. fjords, fjiards and firths

82. balance salt and fresh water

83. mid between positive and negative

84. Pritchard

85. Most estuaries are positive according to Pritchard.

a. **TRUE**

b. **FALSE**

86. Less spectacular relief than a fjord is a fjard or firth

a. **TRUE**

b. **FALSE**

MATCH (87-95)

87. U Shaped

a. lagoon

88. rock sill

b. salt marsh

89. parallel to coast

c. fjord

90. poorly drained

d. mangal

91. shallow

92. wind dominated

93. extensive

94. narrow inlets

95. evolved to barrier islands

96. Tectonically caused estuaries may have: _____.

a. faults

b. grabens

c. volcanos

d. landslides

e. all of these

97. Constraints to circulation may include: _____.

a. solar heating

b. tides

c. gravity

d. landslides

e. all of these

MATCH THE FOLLOWING CIRCULATION TYPES (98-103)

98. Surface-out; bottom-in

a. discharge

99. Surface-in; bottom-out

b. reverse tri-level

146. The probable cause of the Tigris-Euphrates river delta was the glacier and two rivers.

a. TRUE

b. FALSE

147. Coral may inhabit the Persian Gulf.

a. TRUE

b. FALSE

148. Estuaries are common worldwide geomorphological features.

a. TRUE

b. FALSE