CHAPTER 3 – OCE 1001 (Introduction to Oceanography, Professor Chiappone)
MARINE PROVINCES (Trujillo and Thurman, 11th edition)

SAMPLE QUESTIONS

Matching Questions

Match the term with the appropriate phrase. You may use each answer once, more than once or not at all.

A) used to map ocean floor from space
B) measurement of ocean depth and seafloor topography
C) uses high frequency sound waves to measure ocean depth
D) cumulative plot of area versus depth or elevation
E) used echo soundings in 1952 to identify mid-ocean ridge in South Atlantic
F) A method of mapping the topography of the ocean floor along a strip up to 60 km
G) used to determine ocean structure beneath the sea floor

1) bathymetry
2) multi-beam sonar
3) hypsographic curve
4) precision-depth recorder (PDR)
5) seismic reflection profile

Match the term with the appropriate phrase. You may use each answer once, more than once or not at all.

A) shallow-water areas close to continents
B) continental margins not in close proximity to any plate boundary
C) continental margin associated with lithospheric plate boundaries
D) a generally flat zone extending from the shore to the shelf break
E) narrow and deep valleys on continental slopes
F) flat depositional surfaces that cover extensive portions of the deep-ocean basins
G) deep linear scars on the deep-ocean floor caused by plate convergence

6) ocean trench
7) submarine canyon
8) continental shelf
9) continental margin
10) abyssal plain

True/False Questions

11) Satellites measurements of the ocean surface can be used to make maps of the seafloor.
12) The three major provinces of the ocean floor are continental margins, deep-ocean basins, and submarine canyons.

13) The continental shelf is generally defined as a steeply sloping zone extending from the shoreline to the shelf break.

14) Sediments of the continental rise can exhibit characteristics similar to those formed by rivers on land.

15) The deepest portions of the ocean are part of the relatively narrow features called submarine canyons.

16) Seamounts form from ancient tablemounts.

17) Ocean trenches are deep linear scars in the ocean floor caused by the divergence of plates along divergent plate boundaries.

18) Oceanic ridges are cut by a number of transform faults, which offset spreading zones.

19) Due to the very harsh environmental conditions, very few types of organisms are found in association with hydrothermal vents.

20) Black smokers are hydrothermal vents that discharge superheated water with high concentrations of metal sulfides.

**Multiple Choice Questions**

21) The method that used most frequently to investigate sediment and rock layers of the sea floor is:
   A) direct observation.
   B) drilling.
   C) light waves.
   D) satellite observation.
   E) sound waves (specifically seismic reflecting profiling).

22) The two relatively flat areas on the hypsographic curve represent:
   A) continental mountains and abyssal plains.
   B) continental mountains and mid-ocean ridges.
   C) continental slopes and deep-sea trenches.
   D) some interior continental areas/coastal plains and abyssal plains on the ocean floor.
   E) some interior continental areas/coastal plains and mid-ocean ridges.

23) Passive continental margins are characterized by all of the following except:
   A) broad continental shelves.
   B) deep-sea trenches.
   C) shallow coastal waters.
   D) thick sediment accumulation.
   E) very little volcanic and earthquake activity.
24) All of the following are considered part of the continental margin except the:
A) continental rise.
B) continental shelf.
C) continental slope.
D) fracture zone.
E) submarine canyon.

25) Underwater avalanches of muddy water mixed with rocks and debris are:
A) deep sea fans.
B) graded bedding.
C) turbidity currents.
D) turbidite deposits.
E) white smokers.

26) Extending from the base of the continental rises into the deep-ocean basins are flat depositional surfaces called:
A) continental shelves.
B) continental slopes.
C) abyssal hills.
D) tablemounts.
E) abyssal plains.

27) Volcanic peaks on the deep-ocean floor with conical tops are called:
A) seamounts.
B) tablemounts.
C) submarine canyons.
D) oceanic trenches.
E) oceanic ridges.

28) Along the margins of the Pacific are found most of Earth's:
A) seamounts.
B) tablemounts.
C) abyssal hills or seaknolls.
D) oceanic trenches.
E) oceanic ridges.

29) Oceanic ridges and rises result from seafloor spreading along:
A) convergent plate boundaries.
B) divergent plate boundaries.
C) transform plate boundaries.
D) none of the above.

30) Segments of the oceanic ridge system that are gentler and less rugged in slope due to faster rates of seafloor spreading are called:
A) deep-sea trenches.
B) fracture zones.
C) oceanic rises.
D) convergent plate boundaries.
E) transform faults.
31) The organisms in this picture, which are giant tube works, are most likely to be found associated with:

A) abyssal hills.
B) seamounts.
C) hydrothermal vents.
D) submarine canyons.
E) trenches.

32) With respect to mid-ocean ridges, transform faults are:
A) associated with hydrothermal vents.
B) located in submarine canyons.
C) parallel to the rift valley.
D) perpendicular to the ridge axis.

Word Relationships

Examine the five words and/or phrases and determine the relationship among the majority of words/phrases. Choose the one option that does not fit the pattern.

33) A. global positioning system (GPS)
B. GLORIA
C. precision depth recorder (PDR)
D. SeaBeam
E. Sea MARC
34)  
A. continental shelf  
B. abyssal hill  
C. shelf break  
D. continental rise  
E. continental slope  

35)  
A. abyssal plain  
B. continental flood basalt  
C. continental rise  
D. continental shelf  
E. continental slope  

36)  
A. passive margin  
B. ocean trench  
C. volcanic arc  
D. island arc  
E. continental arc  

37)  
A. metal sulfide deposits  
B. pillow basalts  
C. rift valley  
D. seamounts  
E. trenches