**University Larbi BenMhidi OEB,**

**Department of Geology, Exam and response Scientific English, 22-05-2024 (Master I)**

**Quick response**

**Text 1**

The marine sedimentary rocks and environment:

They are found in the ocean. Sediments accumulate rapidly on continental margin (neritic) and slowly in the deep ocean (pelagic). Since there is very little erosion that occurs in the ocean, these sediments provide a good record of ocean and global history.

Marine environments include anything seaward of the shoreline, the dividing line between land and water. All environments can be considered as either terrestrial (on land), marine (under water), or transitional (transitional between land and water):

Marine environments and examples: Although there is some disagreement, several types of marine ecosystems are largely agreed on: estuaries, salt marshes, mangrove forests, coral reefs, the open ocean, and the deep-sea ocean. An estuary is a coastal zone where oceans meet rivers.

What is the classification of the marine environment: The main divisions of the marine environment: The two primary divisions of the sea are the benthic and the pelagic. The former includes the entire ocean floor, while the latter includes the whole mass of water.

Read the paragraph and answer the following questions: (8 marks) **(your responses should include constructed sentences)**

* (a) In marine environment, sediments are accumulating speedily or slowly, cite the concerned environments
* accumulate rapidly on continental margin (neritic) and slowly in the deep ocean (pelagic)……
* (b)What is the degree of destruction effect within marin environment (ocean)
* little erosion that occurs in the ocean…….
* (c)What are the principal partitions (subdivisions) of the marine environment:
* The two primary divisions of the sea are the benthic and the pelagic……
* (d) Give examples of marine ecological organizations (the main subdivisions: )
* estuaries, salt marshes, mangrove forests, coral reefs, the open ocean, and the deep-sea ocean……
* **Text 2 The various sources of seafloor sediment**
* [Terrigenous sediment](https://en.wikipedia.org/wiki/Terrigenous_sediment) is derived from continental sources transported by rivers, wind, ocean currents, and glaciers. It is dominated by quartz, feldspar, clay minerals, iron oxides, and terrestrial organic matter. Pelagic carbonate sediment is derived from organisms (e.g., foraminifera) living in the ocean water (at various depths, but mostly near surface) that make their shells (a.k.a. tests) out of carbonate minerals such as calcite. Pelagic silica sediment is derived from marine organisms (e.g., diatoms and radiolaria) that make their tests out of silica (microcrystalline quartz).[Volcanic ash](https://en.wikipedia.org/wiki/Volcanic_ash) and other volcanic materials are derived from both terrestrial and submarine eruptions. Iron and [manganese nodules](https://en.wikipedia.org/wiki/Manganese_nodule) form as direct precipitates from ocean-bottom water. Clay minerals are predominant over wide areas in the deepest parts of the ocean, and most of this clay is terrestrial in origin. Carbonate sediments are derived from a wide range of near-surface pelagic organisms that make their shells out of carbonate. These tiny shells, and the even tinier fragments that form when they break into pieces, settle slowly through the water column, but they don't necessarily make it to the bottom. While calcite is insoluble in surface water, its solubility increases with depth (and pressure) and at around 4,000 m, the carbonate fragments dissolve. This depth, which varies with latitude and water temperature, is known as the [carbonate compensation depth](https://en.wikipedia.org/wiki/Carbonate_compensation_depth).

**Read the text and reply the questions: (12 marks) (your responses should includes constructed sentences)**

* (a) What types of sediments are found specific and dominant for terrigeneous sediments

quartz, feldspar, clay minerals, iron oxides, and terrestrial organic matter……

* (b)What is the source or origin of Pelagic silica sediment
* organisms Diatomics and radiolarias with tests made of silica…………..
* (c) For the terrigeneous sediments what is their source and type of transport
* Continental sources e.g. fluvial Deltaic Estuaries type of transport wind rivers oceans..……….
* (d)What is the main source of derivation of carbonate pelagic sediments
* … Pelagic organisms that make their shells out of carbonate ……..
* (e)What is the origin of clay minerals mainly found within the ocean
* … most of this clay is terrestrial in origin ………
* (f) What is the possible origin of volcanic deposits within the ocean
* [Volcanic ash](https://en.wikipedia.org/wiki/Volcanic_ash) and other volcanic materials derived from both terrestrial and submarine eruptions ….…