**OCEAN (INTRODUCTION)**   
The Ocean is a large body of saline water covering nearly two-thirds of the earth’s surface i.e. 70% or   
360million square kilometers of the earth’s total area of 510 million square kilometers.   
**Oceanography** is the study of oceans, its movement and economic significance. The depth of the ocean   
is measured using the Echo sound technique now replaced by radar sound technique.   
  
**Types of Oceans**   
1. The Pacific Ocean which occupies 165 million km²   
2. The Atlantic ocean which occupies 82 million km²  
3. The Indian Ocean which occupies 74 million km²   
4. The Arctic Ocean which occupies 14 million km²  
5. Seas which occupy 25 million km²   
  
**Economic Importance of Ocean to Man**   
i. Source of minerals   
ii. Provision of food   
iii. Provision of employment   
iv. Means of transportation   
v. Tourism   
vi. Development of seaports   
vii. Extraction of salt   
viii. Educational research   
ix. Provision of industrial products   
x. Influences climate adjacent to coastlands

**RELIEF OF THE OCEAN**   
1. **The Continental Shelf:** This is shallow water surrounding the continent. It is a continuation into the sea of the coastal plains. This zone is rich in planktons and also contains minerals. Its width ranges from 32 –   
160km, forming 7% of the total area of the ocean.

**Importance of Continental Shelf**  
a. Good fishing ground due to presence of planktons   
b. Development of natural habour   
c. For exploration of petroleum

d. Tourist centers   
e. Sites for sporting (e.g. surfing)   
f. Recreational activities.

2. **Continental slope:** This is the link connecting the continental shelf to the deep sea plain or ocean   
floor. It has a steep slope and a depth of about 400m.   
3. Ocean Ridge: This takes the form of either a ridge or a plateau. It rises from the deep sea plains.   
Some rise above the surface to form Ocean Island.   
4. Deep ocean plains: This is a wide gently undulating or fairly level surface with a depth of between   
2000m – 3000m. The ocean floor is also Abyssal Plain.   
5. Ocean Deeps: These are long, narrow trenches that plunge as great ocean deeps. Materials deposited in ocean deep include:   
a. oozes   
b. clay   
c. mud   
  
**SALINITY OF THE OCEAN**   
Salinity is defined as the degree of saltiness or concentration of salt solution in ocean and sea.   
Salinity is measured in percentage or parts per thousand and varies from ocean to ocean.   
On maps, lines drawn to join all places in the ocean having equal degree of salinity are called   
**Isohalines.**   
The water body with the highest salinity in the world is Lake Van in Asia, having a salinity of 330 per   
1000. The higher the salinity of an ocean, the denser the ocean.

**Factors Affecting Salinity of Ocean**1. The rate of evaporation: This water around the high pressure belts of the trade wind deserts   
between 200 and 300 N and S have high salinity because of high rate of evaporation.

2. The amount of fresh water: Fresh water include: Rivers, rain, streams and melting ice. The lower the volume of fresh water that goes into an Ocean, the higher the degree of saltiness.

3. The degree of water mixing with ocean currents: Within enclosed water bodies with low ocean currents, the salinity is high. But in unenclosed water bodies, there is high mixing of ocean currents, hence reduction in salinity.

**OCEAN CURRENTS**

This is a term given to the regular movement of large masses of surface water from one part of the ocean to another.

**Types of Ocean Current**

1. Warm currents

2. Cold currents

**Causes of Ocean Currents**

1. The Rotation of the Earth

2. The Temperature Differences

3. Salinity

4. The Shape of the Landmass

5. Planetary Winds

**EFFECTS OF OCEAN CURRENTS ON ADJACENT COASTLANDS**

1. Cold currents lead to aridity of the landmasses they blow across

2. Ocean currents modify the climate of an area

3. The meeting of warm and cold currents leads to the formation of plankton which serves as food for fish.

4. In Polar Regions, warm currents help ports to be free from ice.

**Assignment.**

1. Write on the features of the following Oceans;

(i) Pacific Ocean

(ii) Atlantic Ocean

(iii) Arctic Ocean

(iv) Indian Ocean

(v) Antarctic Ocean