**(علم المياه) HYDROLOGY**

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**RFRENCES:**

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2.Wielson,E.M.; "**Engineering Hydrology**".Macullan,London,1983.

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 **SUBJECTS:**

1. The Hydrologic Cycle;

2. Precipitation;

3. Evaporation;

4. Infiltration;

5. Stream Flow;

6. Hydrograph Analysis;

7. Reservoir and Channel Routing;

8. Ground Water Hydraulics;

9. Well Hydraulics;

10. Statistical Hydrology;

11. Sediment Transport;

12. Catchment Simulation.

**HYDROLOGY:** the science considers the water of the earth there,

 occurrence, circulation, and distribution, there

 chemical and physical properties and, there relation to

 there environment including there reaction to living thing.

GEOLOGUY

METEOROLOGY

HYDROLOGY

OCENOGRAPHY

Earth science

**The Hydrologic Cycle:** the train of events by which water leaving the

 atmosphere, moves around the earth and return to

 the atmosphere.

**The Catchment (Drainage Area or River Basin):**

the area which is drained by the river.

**الملاحظة الأولى على الدورة المائية:**

(Atmospheric phase (concerns Meteorologists

(Land phase (concerns Hydrologists

**Phases of the hydrologic cycle**

(Ocean phase (concerns Oceanographers

**الملاحظة الثانية على الدورة المائية:**

 **Rain Storm**

Basin Recharge

1. Interception;

2. Depression Storage;

 3. Soil Moisture;

a. Hydroscopic Water

b. Capillary Water.

Direct Runoff:

1. Over Land Flow

 (surface Runoff);

2. Inter Land Flow.

Ground Water

**Flow Chart of Land Phase**

Precipitation

On Land

Ground Water Flow

Surface Runoff

Transpiration

Infiltration

Evaporation From Soil

Sea

Atmosphere

Evaporation