



# **SNS COLLEGE OF TECHNOLOGY**

**Coimbatore-35  
An Autonomous Institution**



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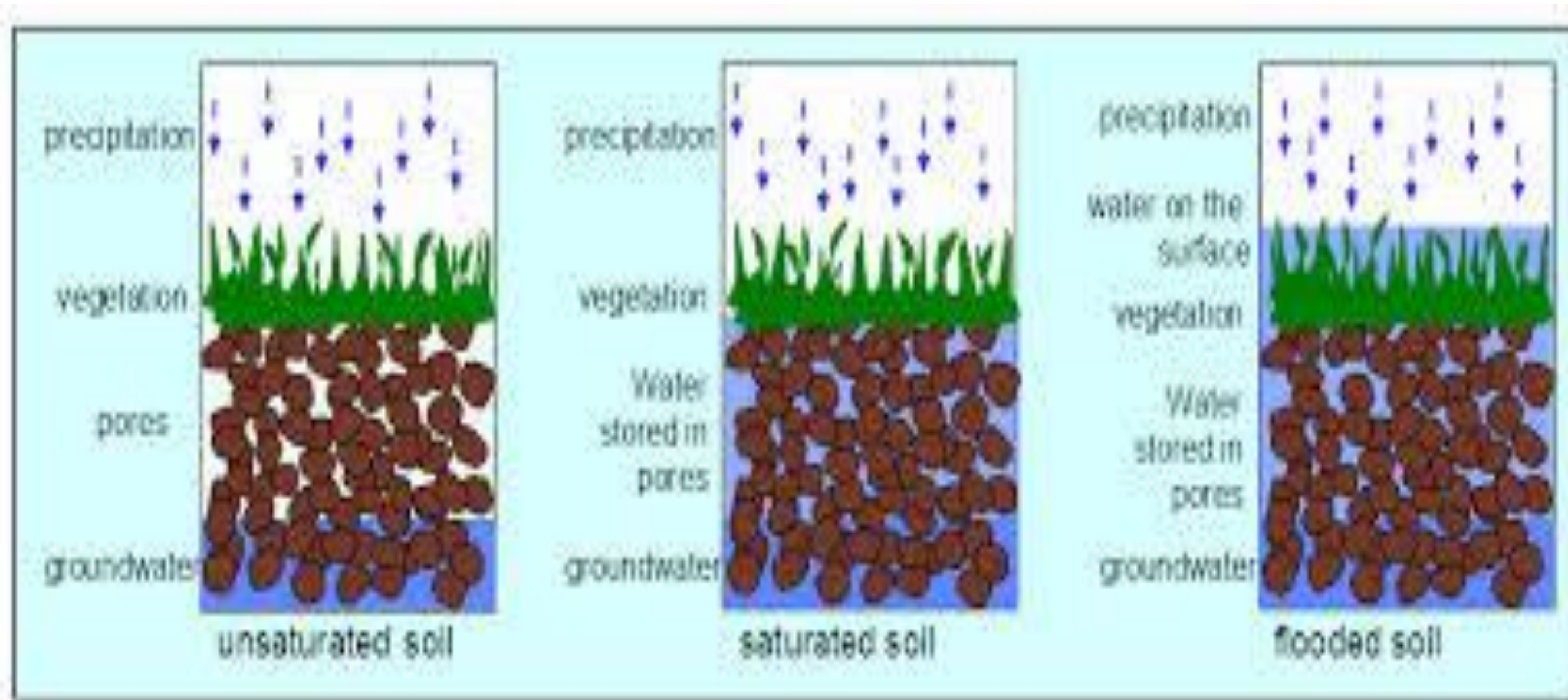
## **DEPARTMENT OF CIVIL ENGINEERING**

### **19CEB301- SOIL MECHANICS**

III YEAR V SEM

#### **UNIT 2 – SOIL WATER AND WATER FLOW**

**Topic 1 : TYPES OF SOIL WATER**





# DEFINITION



- ❖ The water present inside ground surface

## TYPES

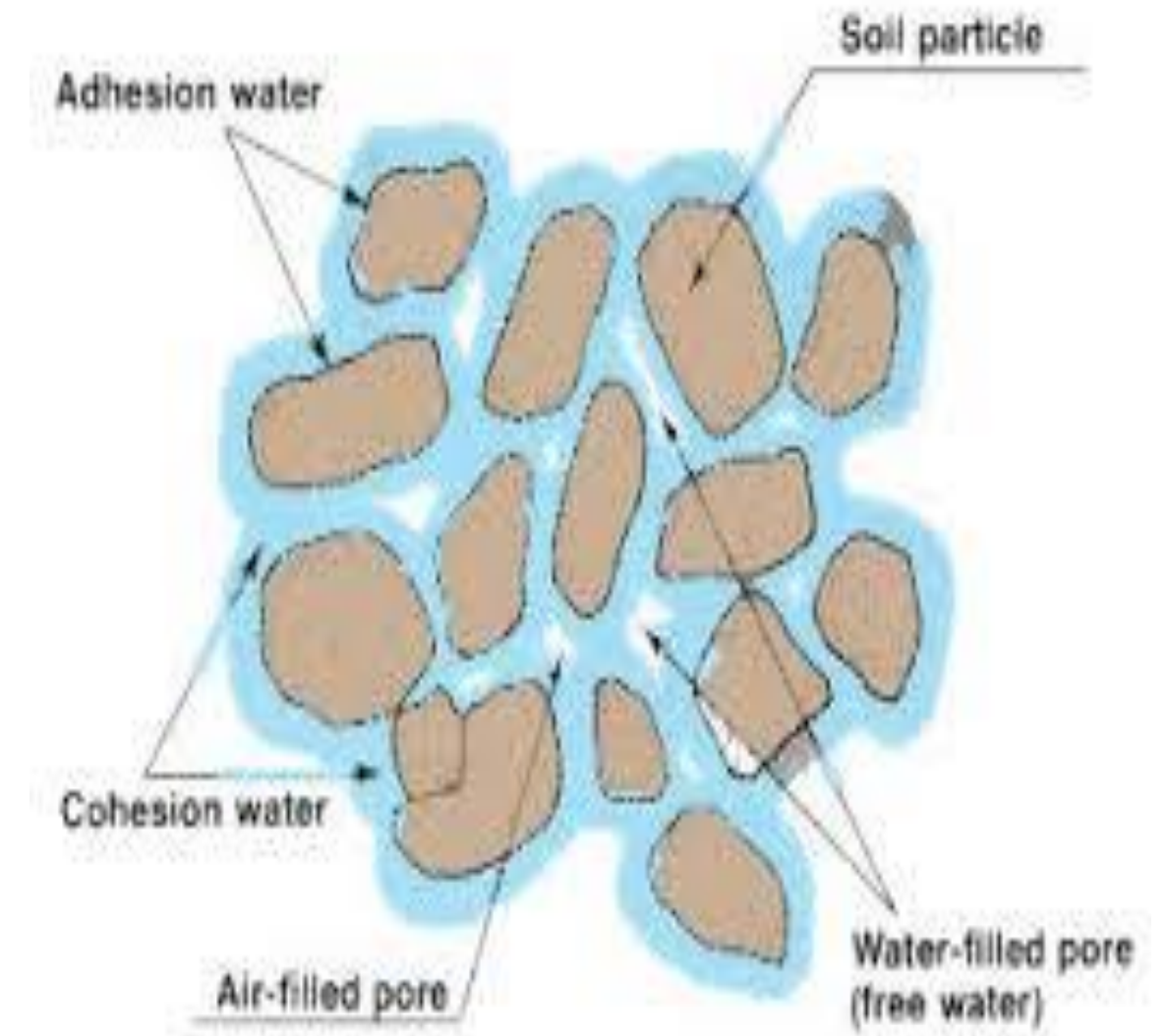
- ❖ Free water – Present at the ground surface
- ❖ Held water- Present between soil pores
- ❖ Capillary water- Present above the ground surface due to capillarity
- ❖ Structural water- Present inside inter-molecular spaces

## NEED

- ❖ To understand the effective stress concepts
- ❖ To assess bearing capacity failures due to water



# SOIL WATER





# APPLICATION



- ❖ Permeability- Property which allows passage of water into soil pores
- ❖ Shear Strength- resistance against sliding
- ❖ Capillarity- rise of water in soil pores
- ❖ Bearing Capacity- to withstand intended loads



# ASSESSMENT



- ❖ What are the types of soil water?
- ❖ What is adsorbed water?



# REFERENCES



- ❖ Coduto, D.P., “Geotechnical Engineering Principles and Practices”, Prentice Hall of India Private Limited, New Delhi, 2002
- ❖ McCarthy D.F., “Essentials of Soil Mechanics and Foundations Basic Geotechniques”, Sixth Edition, Prentice-Hall, New Jersey, 2002
- ❖ Das, B.M, “Principles of Geotechnical Engineering”, (fifth edition), Thomas Books/ cole, 2002



# THANK YOU