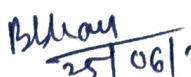


Discipline: Drilling Engineering	Semester: 5th Semester	Name of the Teaching Faculty: Er. Brushabhanu Sahoo, Lecturer Stage-I	
Subject(Lab): PETROLEUM ENGINEERING LAB Subject Code: DEPC305	No. of Periods / week: 04	Session: 2026-27 (Winter 2026) No. of weeks: 15 Semester from date 01.07.2026 to 05.11.2026	
Week	Class Day	Practical Topics	Remarks
1 st	1 st	Measure porosity of reservoir rock samples and understand their storage capacity.	
	2 nd	Measure porosity of reservoir rock samples and understand their storage capacity.	
	3 rd	Measure porosity of reservoir rock samples and understand their storage capacity.	
	4 th	Measure porosity of reservoir rock samples and understand their storage capacity.	
2 nd	1 st	Determine permeability of core samples and evaluate their ability to transmit fluids.	
	2 nd	Determine permeability of core samples and evaluate their ability to transmit fluids.	
	3 rd	Determine permeability of core samples and evaluate their ability to transmit fluids.	
	4 th	Determine permeability of core samples and evaluate their ability to transmit fluids.	
3 rd	1 st	Analyze API gravity and viscosity of crude oil for classification and processing applications.	
	2 nd	Analyze API gravity and viscosity of crude oil for classification and processing applications.	
	3 rd	Analyze API gravity and viscosity of crude oil for classification and processing applications.	
	4 th	Analyze API gravity and viscosity of crude oil for classification and processing applications.	
4 th	1 st	Study compressibility and density of natural gas under varying pressure and temperature.	
	2 nd	Study compressibility and density of natural gas under varying pressure and temperature.	
	3 rd	Study compressibility and density of natural gas under varying pressure and temperature.	
	4 th	Study compressibility and density of natural gas under varying pressure and temperature.	
5 th	1 st	Generate capillary pressure curves and understand fluid distribution in porous media.	
	2 nd	Generate capillary pressure curves and understand fluid distribution in porous media.	
	3 rd	Generate capillary pressure curves and understand fluid distribution in porous media.	
	4 th	Generate capillary pressure curves and understand fluid distribution in porous media.	
6 th	1 st	Prepare drilling mud and test its rheological properties such as density.	
	2 nd	Prepare drilling mud and test its rheological properties such as density.	
	3 rd	Prepare drilling mud and test its rheological properties such as density.	

	4 th	Prepare drilling mud and test its rheological properties such as density.	
7 th	1 st	Prepare drilling mud and test its rheological properties such as viscosity.	
	2 nd	Prepare drilling mud and test its rheological properties such as viscosity.	
	3 rd	Prepare drilling mud and test its rheological properties such as viscosity.	
	4 th	Prepare drilling mud and test its rheological properties such as viscosity.	
8 th	1 st	Prepare drilling mud and test its rheological properties such as gel strength.	
	2 nd	Prepare drilling mud and test its rheological properties such as gel strength.	
	3 rd	Prepare drilling mud and test its rheological properties such as gel strength.	
	4 th	Prepare drilling mud and test its rheological properties such as gel strength.	
9 th	1 st	Determine sand content of drilling fluids using standard tests.	
	2 nd	Determine sand content of drilling fluids using standard tests.	
	3 rd	Determine sand content of drilling fluids using standard tests.	
	4 th	Determine sand content of drilling fluids using standard tests.	
10 th	1 st	Determine filtration loss of drilling fluids using standard tests.	
	2 nd	Determine filtration loss of drilling fluids using standard tests.	
	3 rd	Determine filtration loss of drilling fluids using standard tests.	
	4 th	Determine filtration loss of drilling fluids using standard tests.	
11 th	1 st	Measure wettability and interfacial tension of reservoir rocks and fluids.	
	2 nd	Measure wettability and interfacial tension of reservoir rocks and fluids.	
	3 rd	Measure wettability and interfacial tension of reservoir rocks and fluids.	
	4 th	Measure wettability and interfacial tension of reservoir rocks and fluids.	
12 th	1 st	Interpret basic seismic data and identify subsurface geological features.	
	2 nd	Interpret basic seismic data and identify subsurface geological features.	
	3 rd	Interpret basic seismic data and identify subsurface geological features.	
	4 th	Interpret basic seismic data and identify subsurface geological features.	
13 th	1 st	Perform metering and measurement of oil and gas flow rates using standard instruments.	
	2 nd	Perform metering and measurement of oil and gas flow rates using standard instruments.	
	3 rd	Perform metering and measurement of oil and gas flow rates using standard instruments.	
	4 th	Perform metering and measurement of oil and gas flow rates using standard instruments.	
14 th	1 st	Identify components of wellhead and production systems through equipment demonstration.	
	2 nd	Identify components of wellhead and production systems through equipment demonstration.	
	3 rd	Identify components of wellhead and production systems through equipment demonstration.	
	4 th	Identify components of wellhead and production systems through equipment demonstration.	
15 th	1 st	Understand SCADA systems and their application in modern digital oilfield operations.	
	2 nd	Understand SCADA systems and their application in modern digital oilfield operations.	
	3 rd	Understand SCADA systems and their application in modern digital oilfield operations.	
	4 th	Understand SCADA systems and their application in modern digital oilfield operations.	


 25/06/26
 Lecturer (Stage-I)
 Drilling Engineering
 O.S.M.E., Keonjhar


 PRINCIPAL
 Orissa School of Mining Engineering
 KEONJHAR


 25.6.26
 I/c Head of the Department
 Drilling Engineering
 O.S.M.E., Keonjhar