

Semester

5th Semester	RPP5D001	Petroleum Exploration and Exploitation	L-T-P 3-0-0	3 Credits
------------------------------------	-----------------	---	------------------------	----------------------

Module I

12 Hours

Origin of oil – Important factors that control petroleum occurrence – Migration and accumulation – Source and reservoir rocks – Oil bearing rocks – Continental environment – Transitional environment – Marine environment.

Module II

10 Hours

Geological exploration methods – Geophysical exploration methods – Geochemical methods prognostication – Classification of drilling locations – Economic analysis – Well programme – Geotechnical order.

Module III

8 Hours

Various traps – Anticline – Fracturing – Well logging – Geological control – Gas logging – Drilling control important formation evaluation using wireline logging data.

Module IV

8 Hours

Drilling Fluids: Function, composition, and classification – Packer fluid – Casing packs – Solids removal – Completion methods – Various stimulation methods, Seismic technology – Sniffer survey – Drilling technology – Off-shore rigs – Primary and secondary enhanced oil recovery techniques and methods – Major well complication and Remedies.

Books

1. BhagwanSahay “Petroleum Exploration and Exploitation Practices” Allied Publishers Ltd., Chennai, 1994.
2. Richard Dawe, “Modern Petroleum Technology”, Vol.I, Upstream, 6th Edition, John and Wiley Sons Ltd, 2000.
3. Howard B. Bradley, “Petroleum Engineering Handbook”, Society of Petroleum Engineers, 1987.
4. Norman J. Hyne., “Nontechnical Guide to Petroleum Geology, Exploration, Drilling and Production”, 2nd Edition, Pennwell Books, 2001.
5. Shay B., “Wellsite Geological Techniques for Petroleum Exploration” Allied Publishers Ltd., 1991.