

PCP5J001

PETROLEUM EXPLORATION AND EXPLOITATION

MODULE I

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

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

MODULE III

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

MODULE IV

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.

TEXT BOOKS

- Bhagwan Sahay “Petroleum Exploration and Exploitation Practices” Allied Publishers Ltd., Chennai, 1994.
- Richard Dawe, “Modern Petroleum Technology”, Vol.I, Upstream, 6th Edition, John and Wiley Sons Ltd, 2000.

REFERENCES

- Howard B. Bradley, “Petroleum Engineering Handbook”, Society of Petroleum Engineers, 1987.
- Norman J. Hyne., “Nontechnical Guide to Petroleum Geology, Exploration, Drilling and Production”, 2nd Edition, Pennwell Books, 2001.
- Shay B., “Wellsite Geological Techniques for Petroleum Exploration” Allied Publishers Ltd., 1991.