AMPE21 WELL COMPLETION TESTING AND WORK OVER

UNIT-1 WELL DESIGN

1.1 Prediction of formation pore pressure and stress gradients.
1.2 Determination of safety mud weight bounds for different in-situ stress conditions.
1.3 Design and planning well trajectory.
1.4 Surveying tools and methods.

UNIT-2 DESIGN OF DRILL STRING INCLUDING BOTTOM HOLE (BHA) ASSEMBLY

2.1 Drilling methods and equipment for directional, horizontal and multilateral wells.
2.2 Selection of casing shoes, material properties and design of casing program.

UNIT-3 WELL COMPLETION AND STIMULATIONS

3.1 Well completion design, types of completion, completion selection and design criteria.
3.2 Interval selection and productivity considerations: effects of producing mechanisms.
3.3 Inflow performance and multiple tubing performance analyses using commercial software.

UNIT-4 WELL STIMULATION AND WORKOVER PLANNING.

4.1 Tubing-packer movement and forces.
4.2 Tubing design: graphical tubing design and simplified tensional strength design.
4.3 Selection of down hole equipment, tubing accessories and wellhead equipment.

UNIT-5 BASICS OF PERFORATION

5.1 Selection of equipment and procedure for perforation oil and gas wells.
5.2 Technology of sand control: gravel packing.
5.3 Fundamentals of well stimulation technologies: acidization and hydraulic fracturing.

References Book:

1. Standard Hand Book of Petroleum & Natural Gas Engineering" – 2nd Edition 2005-William C.Lyons & GaryJ.Plisga-Gulf professional publishing comp (Elsevier).