AMPTE20 RUBBER TECHNOLOGY

UNIT-1 NATURAL RUBBER

1.1 Tapping latex, Processing of Latex
1.2 Dry rubber production (Smoked sheet, air dried sheet, Crepe etc.)
1.3 Grading of rubbers
1.4 Modified natural rubber,
1.5 Reclaimed rubber - process of reclamation – applications.

UNIT-2 COMPOUNDING DESIGN AND VULCANIZATION

2.1 Sulphur vulcanization and non-sulphur vulcanization, vulcanization systems -
2.2 Accelerators, activators, promoters, antioxidants, antiozonants, processing aids, fillers and effect of fillers, blowing agents etc.

UNIT-3 SYNTHETIC ELASTOMERS

3.1 Manufacturing, structure, properties,
3.2 Compounding, curing and applications
3.3 Polyisoprene, Polybutadiene, SBR, EPDM, Butyl rubber, Neoprene, Nitrile rubber, .
3.4 Silicone rubber, Fluoro elastomer,
3.5 Polysulphide rubber, polyurethane rubber, Acrylic rubber.

UNIT-4 THERMOPLASTIC ELASTOMERS

4.1 Basic structure, Manufacture, Morphology,
4.2 Commercial grades and Applications
4.3 Thermoplastic styrene block copolymers,
4.4 Polyester thermoplastic elastomers,
4.5 Polyamide thermoplastic elastomer,
4.6 Polyurethane thermoplastic elastomers.

UNIT-5 RUBBER PRODUCT MANUFACTURING 9

5.1 Belting, Hoses, Footwear,
5.2 Rubber metal bonded items, sports goods, cellular rubber

References Books:

1. Anil .K. Bhowmic, Howard L. Stephens (Edt), Handbook of Elastomers - New Developments & Technology, Marcel Decker Inc. New York 1988.
2. Maurice Morton, Rubber Technology