AMTE-13 PROCESS CONTROL IN SPINNING

UNIT-1 LEVELLING

1.1 Different levelling methods adopted in the spinning machines to achieve better uniformity of the products;
1.2 Influence of the uniformity of the intermediate products on the yarn quality;
1.3 Effect of machines and processing parameters on product uniformity;
1.4 Importance of FIBRE mix homogeneity on yarn quality;
1.5 Types and levels of mixing in the preparatory processes;
1.6 Assessment of FIBRE-blend variations.

UNIT-2 NEP AND HOOK REMOVAL

2.1 Causes of nep and hook formation in the FIBRE-opening processes;
2.2 Improving the removal of neps in the carding and combing machines;
2.3 Maximizing the FIBRE hook straightening during the preparatory operations;
2.4 Measurement of neps and hooks.

UNIT-3 WASTE CONTROL

3.1 Control of waste in blow room, card and combers;
3.2 Influence of machine and processing parameters on waste removal;
3.3 Controlling the lint content in waste;
3.4 Cleaning efficiency and cleaning intensity.

UNIT-4 PRODUCTION CONTROL

4.1 Factors affecting the production limits of the spinning machinery;
4.2 Achieving maximum production in the given machinery;
4.3 New concepts in achieving higher production in the spinning machinery;
4.4 Role of machinery maintenance and humidity control on production efficiency;
4.5 Computation of the productivity indices.

UNIT-5 YARN QUALITY ANALYSIS & MAN-MADE FIBRE PROCESSING

5.1 Analysis and control of within length and between length variations and spectrogram;
5.2 Yarn faults classifications;
5.3 Causes and remedies for yarn defects.
5.4 Optimum processing conditions required for man-made FIBREs like polyester,
5.5 Viscose in the spinning machinery.

References Books:

1. Lord P.R., "Yarn Production; Science, Technology and Economics", The Textile Institute, Manchester, 1999
2. Furter R., "Evenness Testing in Yarn Production Part 1 and Part II ", The Textile Institute,