

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**DIPLOMA IN TEXTILE MANUFACTURING TECHNOLOGY**  
**SEMESTER: V**

Subject Name: **Production Planning**

<b>Sr. No.</b>	<b>Course content</b>
1.	<b>Introduction to production planning:</b>  1.1 Objectives of production planning. 1.2 Functions of production planning. 1.3 Advantages of production planning
2.	<b>Layout (Spinning and Weaving):</b>  2.1 Factors affecting selection of site for textile industry. 2.2 Objectives of scientific layout. 2.3 Principles of plant layout. 2.4 Factors affecting layout. 2.5 Methods of layout. 2.6 Advantages of scientific layout 2.7 Layout for Blow room carding-Drawing-Comber, Speed frame, Ring frame and Open end spinning. 2.8 Layout for Winding-Warping sizing and loom (Auto-Non-Auto, shuttleless).
3.	<b>Production Calculation and Norms for Weaving process:</b>  3.1 Production calculation Norms for - winding machine. - warping machine. - sizing machine. - weaving machine. - Non Autolooms and Auto looms - Shuttleless machine
4.	<b>Production Calculation and Norms for Spinning process:</b>  4.1 Production calculation and norms for - Carding machine. - Draw Frame. - Comber. - Speed Frames. - Ring Frame. - Open End Spinning machine (Rotor machine).
5.	<b>Humidification in Textile:</b>  5.1 Importance of humidity in spinning and weaving. 5.2 Types of humidification plant.(Unit Type & Central Station Type).

### **List of Calculation of Spinning:**

<b>Sr.No</b>	<b>Content</b>
1.	Calculate time required to prepare one lap on Blow room.
2.	Calculate time required to exhaust lap on carding machine.
3.	Calculate time required to fill one full can on carding machine, Draw frame and Comber.
4.	Calculate time required to exhaust one can on speed frame.
5.	Calculate time required to prepare one roving bobbin on speed frame.
6.	Calculate time required to exhaust roving bobbin on ring frame.
7.	Calculate time required to build one ring bobbin on ring frame.
8.	Production calculation from Blow room to Open end spinning.
9.	Spinning Organization for carded yarn, comber yarn, P/C blend yarn, O.E Yarn.
10.	Calculate Ratio of them/c between two departments.

### **List of Calculation of Weaving:**

<b>Sr.No</b>	<b>Content</b>
1.	Calculate time required to exhaust one ring bobbin on winding m/c.
2.	Calculate time required to build one cone on winding m/c.
3.	Calculate weight of warper beam.
4.	Calculate time required to prepare one warping beam.
5.	Calculate time required to exhaust warping beam on sizing machine.
6.	Calculate weight of weaver's beam.
7.	Calculate count of yarn in weaver's beam.
8.	Calculate weight of warp and weft in given piece of fabric.
9.	Weaving organization for shirting fabric, suiting fabric.
10.	Calculate ratio of machine between two departments.

### **Reference Books:**

1. Textile Management, Dudheja.
2. Textile mill organization, D.S.Verma.
3. Airtho spin weave, T.C.Shah.
4. Spinning calculation, T.K.Pattbhiram.
5. Spinning calculation, W.S.Tagart.
6. Machine manufacturing, Reiter,SACM.co.
7. Manual for different Spinning & Weaving machines, Sulzer,Rapier,AirjetLoom,etc.
8. Industrial organisation and Engineering, Echonomics T.R.Banga, S.C.Sharma.
9. Textile costing, P.V.Bhave, ATIRA.
10. Weaving calculation, Sengupta.
11. Airconditioning in Textile industry, ATIRA Publication.