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Annexure-F

SYLLABUS FOR ASSISTANT DIRECTOR (TEXTILE & HANDICRAFTS)

PAPER-I

1. Textile Fibres:

Study of different structures of textile fibres using various techniques – Study of different properties of various textile fibres i.e., moisture relations, mechanical properties, optional properties, electrical properties and thermal properties.

Study of different man – made fibre spinning – Fundamentals of fluid flow in man – made fibre spinning T3 High speed melt spinning – Production of micro denier and special shaped fibres.

Production and Properties of various regenerated fibres- Production of various raw materials for different synthetic fibres-Properties of different synthetic fibres – Effect of various parameters on various synthetic fibres- Study of semi-continuous and integrated continuous process for production of Nylons.

Study of different high performance fibres.

Study of spin finish-heat setting and drawing of fibres.

Study of different methods of texturizing and various parameters affecting texturizing -Test methods of textured yarns.

2. Yarn Manufacture:

Ring Spinning: Principle and method of working of ring spinning process – Blowroom, carding, combing, drawframe, speedframe, ringframe; post Spinning process, viz. Bundling, baling and reeling.

Doubling: Objects- Dry doubling and wet doubling- fancy yarns – Hosiery and shiny threads- properties and end uses.

Open end spinning: Principles of Break- spinning-comparison of ring and OE yarn developments in OE spinning-different types rotors and opening rollers.

Modern yarn production methods: Twist less spinning- self twist spinning- wrap spinning -friction spinning and air-jet spinning, comparison of the above methods for their principles and yarn properties, end used and techno-economics feasibility- siro and cover spinning methods.

3. Fabric Manufacture:

Unconventional Weaving Machine: Study of Gripper- Rapier- Air Jet, Water Jet machine.

Nonovens: Classification web productions techniques- Properties of Binders- Geometry of non-woven structure Identification and testing of non-woven study of thermal, spun bonding and spun lacing.

P. Pranjyoti



Knitting: Weft basic stitches-Jersey-Rib-Purl-Inter Look-Warp Basic Stitches-Atlas-Tricot- Study of circular weft knitting machines-advantages of positive feed- study of warp knitting machines- Tricot and Raschel.

4. Chemical Processing of Textile:

Dyeing:

Coloration –Theories of coloration / dyeing –factor affect Dyeing –Mechanism of dyeing

Mechanism used for dyeing –classification of dyes dyeing of nature fivers using direct, reactive, acid, complete Vat, sulphur, Ingrain dyes and other popular dyes using-different methods- After treatment and testing dyed materials –Yarn package dyeing –Dyeing of knitted fabrics –dyeing of garments.

Printing: Design development for printing –sources of inspection - the design tools and work space- Different techniques for design generation reproduction-Transfer of designs on wooden block screen and Scope of printing –Batik printing, resist printing, Tie and dyed. Methods and principles – Machineries used for Textile printing- Passage of Material through machines.

Finishing: Object of finishing –various methods of finishing –cotton, silk, warp worsted fabric – chemical formulation of different finished – Machines used for finishing – specialty chemicals used for finished finishing of Garments.

PAPER- II

1. Fabric Structure:

Extra wrap and extra weft cloths –double cloth Terry weaves- valued velveteen - Gauge and Leno-Damask –Brocade cloths.

2. Fashion Design and Garment Technology:

Terms and Definitions used in Fashion and Garment Industries –that art and Techniques of Body measurements and standard sizes (8 – head theory & 10 – head theory) and measurements prevalent in Garment Industries.

Principles and practices of pattern making – Gracing –Computer Aided pattern making and grading-cutting room operation –Laying –Cutting Numbering – Bundling –Sewing operation, –Classes of seams and stitch, sewing threads, defects is sewing & seam.

Garment finishing section- Buttoning, Labelling, tagging, Checking, pressing, Folding, packing and packing standard, fusing.

Quality control in garment Industry – Garments washing- dyeing and finishing Brand culture and apparel.

Apparel: brand names. Sourcing and Merchandising -Apparel Engineering and Production Control.

S. Princy



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3. Embroidery Technology:

Planning of colour scheme. Design making, transferring of design, different types of stitches for embroidery, tampur, work, feather stitches, applique designing, picture making in applique, lion and children panel in applique, details about smocking, drawn thread work, cut work, Metal thread embroidery. Beading crewel work, quality work machine embroidery, tools of embroidery, canvas work, Half cross stitches, tent stitch, stem stitch, mosawd stitch, cheveron stitch.

4. Handloom & Handicrafts for rural economic development in Arunachal Pradesh.

Prospects and problems of Handloom & Handloom & Handicrafts development in Arunachal Pradesh including NER.

Study of different Handloom design/weaving pattern of people of Arunachal Pradesh.

Study of different local handicraft items of Arunachal Pradesh.

NHDP components: - Policy and implementation.


Secretary
Arunachal Pradesh
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