

ASSAM PUBLIC SERVICE COMMISSION

Syllabus for the written Test in respect of selection to the post of Superintendent, Handloom & Textiles under Handloom Textiles and Sericulture Department, Assam.

The written examination will consist of paper-I (General Knowledge) and Paper-II (Handloom & Textile) and both the paper will be objective Type. Both the paper will consist Multiple choice questions (MCQ) of 100 marks each and 2(two) hours duration. Details of syllabus is given below:-

Subject	Analysis of Subject	Total Marks	Duration
Paper-I General Knowledge	1.Current events- National, International and state of Assam (Last 6 to 9 Months)	100 Marks	2 Hours
	2.Basics of Indian Constitution and Panchayati Raj System of India		
	3.Physical, Economic and Social Geography of India & Assam		
	4.History, Literature, Culture, Tribes, Traditions and Festivals of Assam		
	5.Science and Technology, Industries and Textile Business of Assam		
Paper-II	Handloom & Textiles	100 Marks	2 Hours
1. TEXTILE FIBRE: a. Characteristics of Textile Fibre. b. Classification of Textile Fibre on basis of its source and origin and geographical distribution . c. Study of Natatural, Man-made and Mineral fibre. d. Manufacturing process of Man-made fibre. e. Physical, Chemical properties and use of Cotton, Bast, Linen, Ramie, Flex, Silk, Wool, Rayons, Polyester, Nylon, Terelene Acrylic, Orlon, Asbestos, glass, carbon, other industrial fibre etc. f. Identification of different fibre. g. Microscopic view of cross and longitudinal section of different textile fibre. h. Strength and fineness of textile fibre. 2. WEAVING MECHANISM: a. Definition of weaving and common weaving terms. b. Introduction and Classification of looms. c. Different Motions and functions of looms. d. Handlooms: Types, Specifications, Advantages, disadvantages, limitations, uniqueness etc. e. Winding: Objectives, mechanism, tensioning devices, use of winding machines,			

- defects at remedies.
- f. Study and uses of high speed warp and weft winding m/c.
- g. Study and uses of various attachment of looms: Draw boy, Dobby and Jacquard m/c
- h. Sizing: Objectives, Ingredients, Preparation, application etc.
- i. Study and uses of Slasher sizing m/c, Multi-cylinders hot air sizing m/c etc.
- j. Study and uses of different stop motion.
- k. Study and uses of Terry looms, Automatic looms, Cop changing looms etc.
- l. Study and uses of unconventional weaving : Projectile, Rapier, Airjet, Waterjet etc.
- m. Defects and Value loss in weaving.
- n. Weaving Calculation.
- o. Study and uses of Knitting: warp and weft knitting, its structure etc.
- p. Management of a weaving workshop.
- q. Back ground history of Handloom.
- r. Govt. Export policy.
- s. Function of Khadi village Commission of India (KVC).

3. SPINING:

- a. Mechanism and Function of Machine.
- b. Objectives and uses of ginning, mixing , blending , opening, Cleaning and its machineries.
- c. Objectives uses of blow- room, carding modern trends in carding operation, maintenance and calculation.
- d. Study and uses of draw frame combing, drafting defects maintances and calculation.
- e. Speed frame: objective, Principles, modern trend, defects and remedies and calculation.
- f. Ring Feame: Objectives, uses, twisting, ballooning, maintenance and calculation.
- g. Open-end spinning : Study, Operation and composite spinning.
- h. Core Spinning.
- i. Doubling: Principle, study and its use.
- j. Study and manufacturing process of Jute Yarn, spun silk yarn, texturizing, fancy yarn, mane made fibre spinning, worsted and waste spinning.
- k. Yarn costing, Calculation.
- l. Process control etc.
- m. Yarn defect and their effect on fabric.

4. TECHNICAL TEXTILE:

- a. Introduction.
- b. Classification.
- c. Brief study, uses and analysis of medical Textile, Protective textile, Geo Textile etc.

5.FABRIC STRUCTURE AND CLOTH ANALYSIS

- a. Basics of weaving and its concepts.
- b. Introduction of woven and non woven fabric structure.
- c. Study of drawing, drafting, peg plan, tie up plan etc.
- d. Construction and uses of : Plain,Rib, Mat, Twill, Honey Comb, Mock leno etc. design.
- e. Study of Yarn numbering system: Direct, Indirect, resultant count etc and its calculation.
- f. Construction and uses of Bed ford cord, warp and weft pile, basic cloth design, double cloth design etc.
- g. Gauge and leno weaving.
- h. Warp, weft calculation.
- i. Analysis of woven cloth.
- j. Introduction and uses of Computer Aided Textile design.
- k. Introduction to weave, creation of different textile design.

- l. Study and uses of Computerized card punching m/c (Automatic and Semi automatic)
- m. Fabric parameters of widely used fabrics such as Dhoti, Mekhala Chaddar, School uniform as per B.I.S.

6. TEXTILE CHEMISTRY:

- a. Introduction to chemical processing of textiles.
- b. Introduction and study of scouring, bleaching of cotton, silk, wool etc.
- c. Study and uses of scouring and bleaching m/cs and its functions.
- d. Theory of dyeing and materials preparation for dyeing.
- e. Assistants and auxiliaries.
- f. Classification of dyestuffs and its properties.
- g. Application of different dyestuffs on various textiles fibre as per their properties.
- h. Introduction and study of vegetable dye and its application.
- i. Dyeing of synthetic fibres and its blends.
- j. Quality control in textile chemical processing.
- k. Study and uses of various dyeing m/cs.
- l. Testing and identification of different dyestuffs.
- m. Study of printing process, types of printing and uses of printing m/cs.
- n. Study of technology of finishing and its types, namely wash & wear finish, water proof, water repellent, mildew proof, soil release, flame retardant finish etc.
- o. Calculation relating to costing, production of dyed and printing materials.
- p. Study of singeing of fabric, desizing of cotton fabric/fibre, degumming of silk fibre.
- q. Testing and identification of dyes stuff present in dye samples.

7. TEXTILE TESTING:

- a. Effects of temperature and moisture on textile processes and testing operations and uses of hygrometers and air conditioning.
- b. Study of fibre length, fineness, maturity, strength etc.
- c. Uses of bare sorter, stapling etc.
- d. Study of yarn numbering and its findings.
- e. Study of yarn twist, strength testing, evenness testing etc, and uses of its m/cs.
- f. Study and findings of fabric testing: thickness, weight, crimp, crease, drape, air and water permeability etc. and uses of its m/cs.
- g. Role of SQC in process control.

8. TEXTILE FACTORY PLANNING AND ORGANIZATION:

- a. Factors to be consider in planning for a textile enterprise and its concepts.
- b. Study of machinery Planning, material planning and handling etc.
- c. Preparation of maintenance planning and its operation.
- d. Introduction and importance of safety measures and its norms.
- e. Organization of : Spinning, weaving and Processing organization.
- f. Process control.
- g. Environment and pollution management.
- h. Types of pollution in textile units.
- i. Pollution monitoring.
- j. Uses of ETP and its norms.
- k. Safety and hazard control in a textile unit.

11/04/17
Deputy Secretary,

Assam Public Service Commission,
Jawaharnagar, Khanapara, Guwahati-22.