

Textiles syllabus

Every examinable topic area in WAEC Textiles, in one place — with how the papers are structured and answers to common questions. Compiled by waecbt.com; not an official WAEC document.

How the papers work: Three papers, all compulsory. Papers 1 and 2 form a composite paper taken at one sitting. Paper 1: 40 multiple-choice objective questions answered in 50 minutes for 40 marks. Paper 2: six essay questions of which candidates answer four in 2 hours for 60 marks. Paper 3: a practical test in which candidates choose one of two projects, carried out over five days of six hours each, for 80 marks, plus 20 marks for preparatory notes on the project sent to candidates two weeks before the test, making 100 marks. The syllabus assesses knowledge of fibres, yarns and fabric construction, dyeing and printing, fabric finishing, textile testing and care, traditional and industrial textile production, design, costing and entrepreneurship in textiles.

1. 1. Introduction to Textiles

- Meaning and scope of textiles; importance of textiles to the individual, society and the economy
- History of textiles in Nigeria and West Africa; traditional textile centres — Kano, Abeokuta, Iseyin, Akwete, Okene, Bida
- Careers in textiles: designer, weaver, dyer, printer, technologist, merchandiser, teacher

2. 2. Textile Fibres

- Classification of fibres: natural — vegetable (cotton, linen, jute, sisal, kenaf, raffia), animal (wool, silk, hair); mineral (asbestos); man-made — regenerated (rayon, acetate) and synthetic (nylon, polyester, acrylic)
- Sources, production and processing of cotton, wool, silk, linen and man-made fibres
- Properties of fibres: physical, chemical and thermal; burning tests and other identification tests
- Uses of fibres and blends

3. 3. Yarns

- Meaning of yarn; spinning — hand spinning with spindle and wheel, mechanical spinning
- Types of yarn: spun and filament; single, ply and cord; twist (S and Z); novelty yarns
- Yarn numbering and count; yarn properties and uses

4. 4. Fabric Construction

- Weaving: parts of the loom — warp beam, heddles, reed, shuttle, beater, cloth beam; loom types — traditional narrow (horizontal) loom, broad (vertical) loom, power loom; weaving motions — shedding, picking, beating up, taking up, letting off
- Basic weaves: plain, twill, satin and sateen; derivatives — basket, rib, herringbone; figured weaves — jacquard, dobby, pile
- Knitting: weft and warp knitting; hand and machine knitting; stitches; properties of knitted fabrics
- Other methods: crocheting, felting, bonding, lace making, netting, braiding, macrame, tufting
- Traditional fabrics: aso-oke, akwete, kente, adire, okene cloth

5. 5. Colour, Dyeing and Printing

- Colour theory: primary, secondary and tertiary colours; colour wheel; hue, value and intensity; colour schemes
- Dyes: natural (indigo, camwood, henna) and synthetic (vat, direct, reactive, disperse, acid, basic); mordants; dyeing methods
- Resist dyeing: tie-dye, batik (wax resist), adire eleko (starch resist), stitch resist
- Printing: block, screen, stencil, roller and transfer printing; printing pastes

6. 6. Fabric Finishing, Testing and Care

- Finishes: mechanical — calendering, embossing, napping, sanforising; chemical — mercerising, bleaching, sizing, crease resistance, water repellence, flame resistance, moth proofing
- Textile testing: fibre identification, strength, colour fastness, shrinkage, absorbency, abrasion
- Care of textiles: laundering, ironing temperatures, storage; international care labels and symbols; stain removal

7. 7. Design, Costing and Entrepreneurship

- Elements and principles of design applied to textiles; motifs and repeats; sketching designs
- Textile production as a business: sourcing materials, costing and pricing of products, marketing, record keeping
- Setting up a small textile enterprise: weaving, tie-dye, batik, screen printing, knitting
- Quality control and packaging of textile products

Frequently asked questions

How is the WAEC Textiles exam structured?

Three papers. Paper 1 has 40 objective questions in 50 minutes (40 marks); Paper 2 has six essays of which you answer four in 2 hours (60 marks); Paper 3 is a practical project for 100 marks. Papers 1 and 2 are taken together at one sitting.

How does the practical project work?

You choose one of two projects. Preparatory notes on the projects are sent to schools two weeks before the test and your notes and preparation earn 20 marks. The project itself is carried out over five days of six hours each for 80 marks and is assessed on design, technique, finish and presentation.

Which fibres must I be able to classify and identify?

Natural vegetable fibres (cotton, linen, jute, sisal, raffia), animal fibres (wool, silk), mineral (asbestos), regenerated man-made (rayon, acetate) and synthetic (nylon, polyester, acrylic). Know their sources, properties, uses and how the burning test distinguishes them.

What are the weaving motions?

Shedding (raising some warp threads to form a shed), picking (passing the weft through the shed), beating up (pushing the weft into place with the reed), taking up (winding finished cloth onto the cloth beam) and letting off (releasing warp from the warp beam).

Which resist-dyeing methods are in the syllabus?

Tie-dye (tying, folding or binding before dyeing), batik (wax resist), adire eleko (cassava-starch resist painted or stencilled), and stitch resist. Indigo is the traditional dye; know mordants and the difference between natural and synthetic dyes.

Are there calculations?

Yes: yarn counts, warp and weft ends per unit width, fabric lengths and widths from loom settings, fabric weight, shrinkage percentages, dye quantities and the costing and pricing of textile products. The bank includes computed examples with worked answers.

How should I plan the essay paper?

Four essays in two hours gives thirty minutes each, so plan an introduction, well-labelled sketches where relevant (a loom, a weave structure, a colour wheel) and numbered points. Typical essays ask for the processing of a fibre, steps in a dyeing or printing process, the properties of a weave, or the planning of a textile business.

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