

TEXTILE DYEING AND PRINTING

B.A/ B.Sc. / B.Com. Part -1 -2013

Scheme :

B.Sc.-Pt-I	Nomenclature	Dur.	Max./Min. Marks	Max./Min. Marks	No. of Periods
Paper-I	Weaving and Mkt.	3 hrs	75 27	65 24	3
Paper-II	Designing & Dyeing	3 hrs	75 27	65 24	3
Practical		4 hrs	75 27	70 26	4/ Batch

PAPER- 1 (Weaving and Marketing)

Duration: 3 hrs

Max. Marks: (Sc)-75/(Arts/Comm.)-65

Note: The question paper will contain three sections as under-

- Section-A:** one compulsory question with 10 parts, having 2 parts from each unit, short answer in 20 words for each part. 10 (Sc.)/05 (Arts/Comm.)
- Section-B:** 10 questions, 2 questions from each unit, 5 questions to be attempted, taking one from each unit, answer approximately in 250 words. 35 (Sc.)/35 (Arts/Comm.)
- Section-C:** 04 questions (question may have sub division) covering all units but not more than one question from each unit, descriptive type answer in about 500 words, 2 questions to be attempted. 30 (Sc.)/25 (Arts/Comm.)

UNIT-1 Introduction to Textile

- Classification of textile fibers
- General properties of textile fibers
- Identification of textile fibers

UNIT-2 Natural Fibers-Manufacture, Chemical composition, general properties & Flowchart-cotton, silk, wool
Manmade Fibers- Manufacture, Chemical composition, general properties & Flowchart - Rayon, Nylon, Polyester

UNIT-3 Preparatory processes

- (a) Scouring
- (b) Bleaching (i) bleaching of cotton, silk, nylon (ii) Optical bleaching agents
- (c) Desizing (i) Acid desizing (ii) Rot steeping (iii) enzymatic desizing
- (d) Singing (i) gas singing (ii) Plate signing (iii) roller singing
- (e) Mercerization-Historical significance & introduction Action of Caustic Soda on Cotton fibre, Nature of Change occurring in cotton fibres

UNIT-4 (a) Introduction to weaving

- Terms used in weaving
- Loom & it's parts
- Elementary weaves and their derivatives
Plain weave- Rib, Basket
Twill weave-Right hand & Left hand
Satin weaves- Satin & sateen

(b) Weave Representation : Weaving plan, Various Drafts and Peg Plans

UNIT-5 Meaning, nature & scope of marketing

- Role & importance of marketing in modern economy.
- Meaning and importance of marketing mix
- Products, Pricing, Physical distribution, Promotion

References

1. Textiles- Bucker-(1998)Abhishek Publication
2. Essentials of Textiles- M. Joseph, Holf Rinechants,
3. Textile -Year 1998-By A.F. Barker -Chapter 7, Principles of weaving-Pg.154-174
4. Weaving Technology-M.M.Kulkarni, Virinda Publication, Jalgon
5. Principles and practice of Dyeing- V A Shenai, 1993 Sevak Publications.

B.A/ B.Sc. / B.Com. Part -1 Paper-II (Designing & Dyeing)

Duration: 3 hrs

Max. Marks: (Sc)-75/(Arts/Comm.)-65

Note: The question paper will contain three sections as under-

- Section-A:** one compulsory question with 10 parts, having 2 parts from each unit, short answer in 20 words for each part. 10 (Sc.)/05 (Arts/Comm.)
- Section-B:** 10 questions, 2 questions from each unit, 5 questions to be attempted, taking one from each unit, answer approximately in 250 words. 35 (Sc.)/35 (Arts/Comm.)
- Section-C:** 04 questions (question may have sub division) covering all units but not more than one question from each unit, descriptive type answer in about 500 words, 2 questions to be attempted. 30 (Sc.)/25 (Arts/Comm.)

- UNIT-1
1. Elements of design (line, form, colour, texture, tone, space)
 2. Principle of design (unity, harmony, balance, dominance, rhythm, proportion)
 3. Definition of Motifs & its characteristics with reference
 - Classification of motifs (i) Traditional (ii) Modern
 - Types of motifs (i) Geometrical (ii) Stylized (iii) figurative (iv) Abstract (v) Folk (vi) Tribal
 4. Concept of Repeat in Design:
Types of Repeats: Plain, Vertical, Horizontal, Twill, Mirror, Half step, All over.

- Unit 2
- Nomenclature of Dyes: Colour and Dyes, colouring and Dyeing.
The dye molecule (chromophores and auxochromes)
Theory of dyeing (Affinity of a dye, role of water, electrolytes, heat)
Dye auxiliary: Carriers or swelling agents, leveling agents (anionic leveling agents and cationic leveling agents).

- Unit 3
- Classification of dye-stuff and its properties
(A) Natural - (a) Vegetable (b) Animal (c) Mineral
(B) Synthetic dyes - Acid dyes, direct dyes, reactive dyes, Vat dyes, Sulphur dyes, Azoic dyes

Unit 4 Dyeing of textile goods in various forms and machinery employed

(A) Dyeing of loose fibers

(B) Dyeing of yarn

i. Hank dyeing machine

ii. Cheese/Bobbin dyeing machine

iii. Beam dyeing machine

(C) Cloth dyeing

i. Jigger dyeing machine

ii. Winch dyeing machine

iii. Padding mangle

iv. Thermosole process

v. Dope dyeing

Unit 5 Study of dyed textiles according to colour, dyes, motifs & techniques:

a) Patola b) Ikat c) Pochampalli d) Bandhani

References:

Bosom worth Dorothy (1995): The encyclopedia of patterns and motifs, Studio editions, London

Grociki, Z.J.; Watsons Textile Design and Colour, London, Newness Butter Worth

V.A. Shenai (1987), Chemistry of dyes and principles of Dyeing, Sevak Prakashan, Mumbai

V.A. Shenai (1987) Technology of Textile Processing, Vol.IV, Sevak Publication.

शर्मिला गुर्जर " वस्त्र की रंगाई एवं छपाई"

Technology of Textile Processing -Vo.II, Chemistry of Dyes and Principles of Dyeing, V.A. Shenai, 1993, Sevak Publications.

Practical

Max. marks 75 for science Min. marks 27 for science Duration Four-Hrs.

Max. marks 70 for arts Min. marks 26 for arts

(Four pd/week)

1. Colour wheel, primary, secondary, tertiary colour, cool colours, warm colours Monochromatic, complimentary polychromatic, analogous colour
2. Tie and Dye (Different patterns on handkerchiefs) with direct dyes.
3. Assan- weaving (10"x10")
4. Identification of fibers – cotton, silk, wool, polyester, nylon.
4. Assessing ends and picks per inch of different fabrics
6. Preparation of fabrics for dyeing & printing (desizing, scouring, bleaching)
7. Dyeing with Direct, Acid and Sulpher dyes in different shades
8. Field and industrial visit