

3.2.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)

1. REMEDIAL METHODS FOR POLLUTION, DRINKING WATER AND SOIL FERTILITY STANDARDS.

Skill Enhancement Course-II

**Remedial Methods For Pollution, Drinking Water and Soil
Fertility Standards**



**B.Sc. Chemistry
II Year
Semester-IV**

**Dr. Mudavath Ravi
Putta Venkat Reddy**

**Gopu Srinivas
Vuradi Ravi Kumar**

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- (i) Reverse osmosis
 - (ii) Disinfection methods such as chlorination, ultraviolet light, ozonation etc,
 - (iii) Chemical oxidation and (iv) Ion exchange (water softeners)

Visit to nearby drinking water plants and interaction at sites.

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- (i) Boron ($B_4 O_7^{2-}$),
 - (ii) Copper (Cu^{2+}),
 - (iii) Iron (Fe^{2+} , Fe^{3+}),
 - (iv) Manganese (Mn^{2+}),
 - (v) Molybdenum (MoO_4^{2-}),
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 - (ii) Chlorine (Cl)
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Visit to nearby agricultural farms and interaction with farmers. Discussion with farmers on the use of soil analysis kits.

Question & Answers

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Heal the Earth, Heal our Future



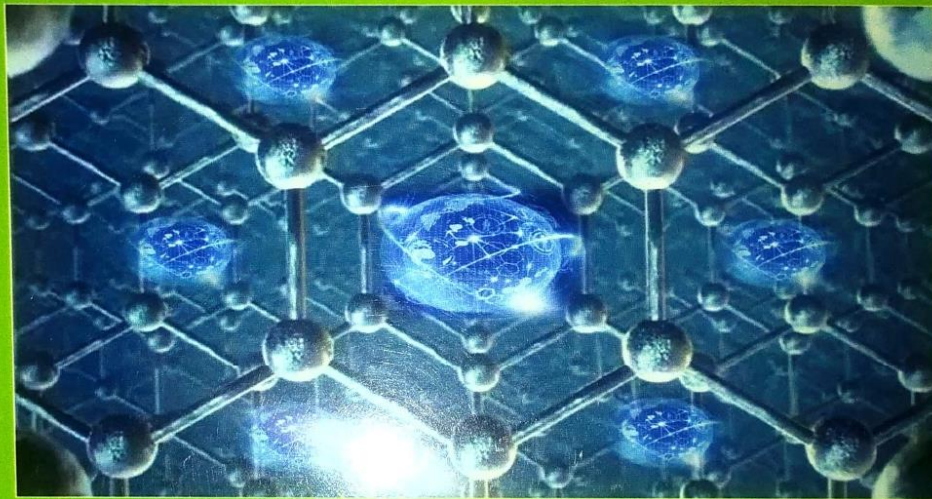
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2. Materials and their Applications.

Materials and their Applications

Skill Enhancement Course-III



B.Sc - III Year

Telangana Universities

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B.Sc. Chemistry III Year
Semester - V
Skill Enhancement Course- III (SEC - III) (2 Credits)
Materials and their Applications 30 Hrs

Unit – I: Types of Materials

15 Hrs

Introduction: Materials and their importance. Classification of Materials, Advanced materials and their need. Types of Materials: Metals, ceramics, polymers and composites; Nature of bonding (Type of bond present). Types and applications of metal alloys: Classification- ferrous and non-ferrous alloys. Ferrous alloys -types and their applications. Non-ferrous alloys – Cu, Al, Ti alloys, their applications and super alloys.

Field Work- Collection of Metal Alloy Samples

Types and Applications of Ceramics: Classification of Ceramics based on their application- glasses, clay products, refractories, abrasives, cements, and advanced ceramics. **Glasses:** Compositions and Characteristics of Some of the Common Commercial Glasses; Properties and applications of glass ceramics - preparation of charts depicting various types of glass and their use. **Clay products:** Structural clay products and the white wares. **Refractories:** Compositions of four Common Ceramic Refractory Materials, fireclay, silica, basic refractories ex. MgO and special refractories ex. Alumina and Zirconia. **Cements:** Classification, preparation of cement and the setting process; quick setting cements; applications.

Field Work-Visit to industries and collection of samples of materials

Unit-II Types of Polymers and Applications

15Hrs

Classification of Polymeric materials based on application: Coatings, adhesives, films, foams examples. **Polymer Additives:** Fillers, Plasticizers, Stabilizers, Colorants, Flame Retardants with examples. **Advanced Materials:** Types of advanced materials - semiconductors, bio-compatible materials, smart materials, advanced polymeric materials and nano-engineered materials. **Biocompatible materials:** Definition. Materials used as biomaterials and their properties. Metals and alloys used in bone and joint replacement. Filling and restoration materials – dental cements, dental amalgams, dental adhesives.

Field Work- Visit to Dental Clinics and interaction with Doctors regarding materials used in Dental treatments

Smart materials: Shape memory alloys- definition and examples (Ni-Ti alloys, Cu based alloys), applications. **Conducting polymers:** - Introduction, Electrically conducting polymers and their uses (polyaniline, polypyrrole, polyacetylene and polythiophene).

Materials and their Applications

SEC -III

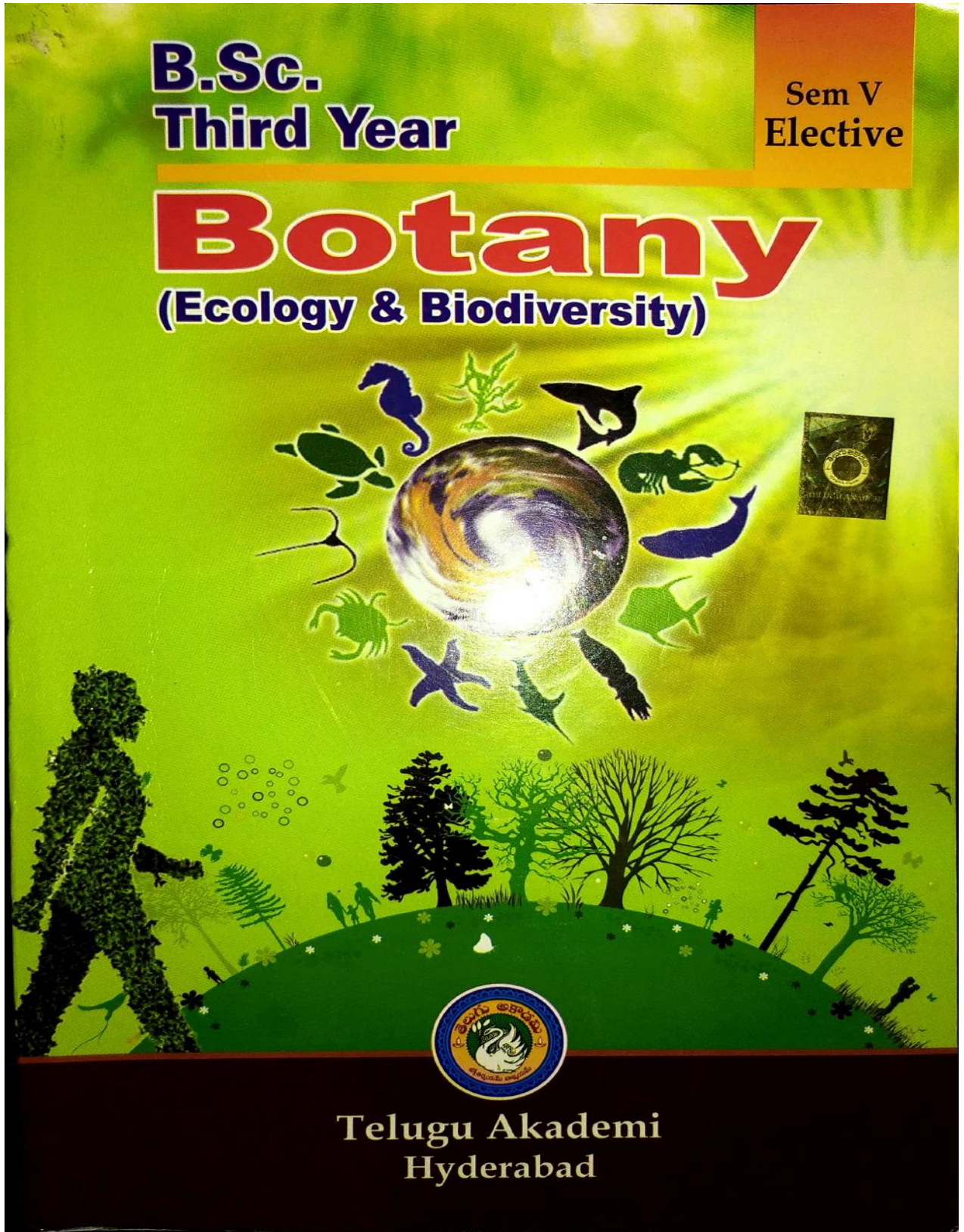
B.Sc -III Year

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3. Botany - Ecology and Biodiversity.



Telugu Akademi Publications
B.Sc., Botany

B.Sc.
Third Year
Semester - V
BOTANY
Ecology & Biodiversity
(Elective Paper)

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Telugu Akademi
Hyderabad

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Sem V
Elective

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Third Year

Botany

(Ecology & Biodiversity)



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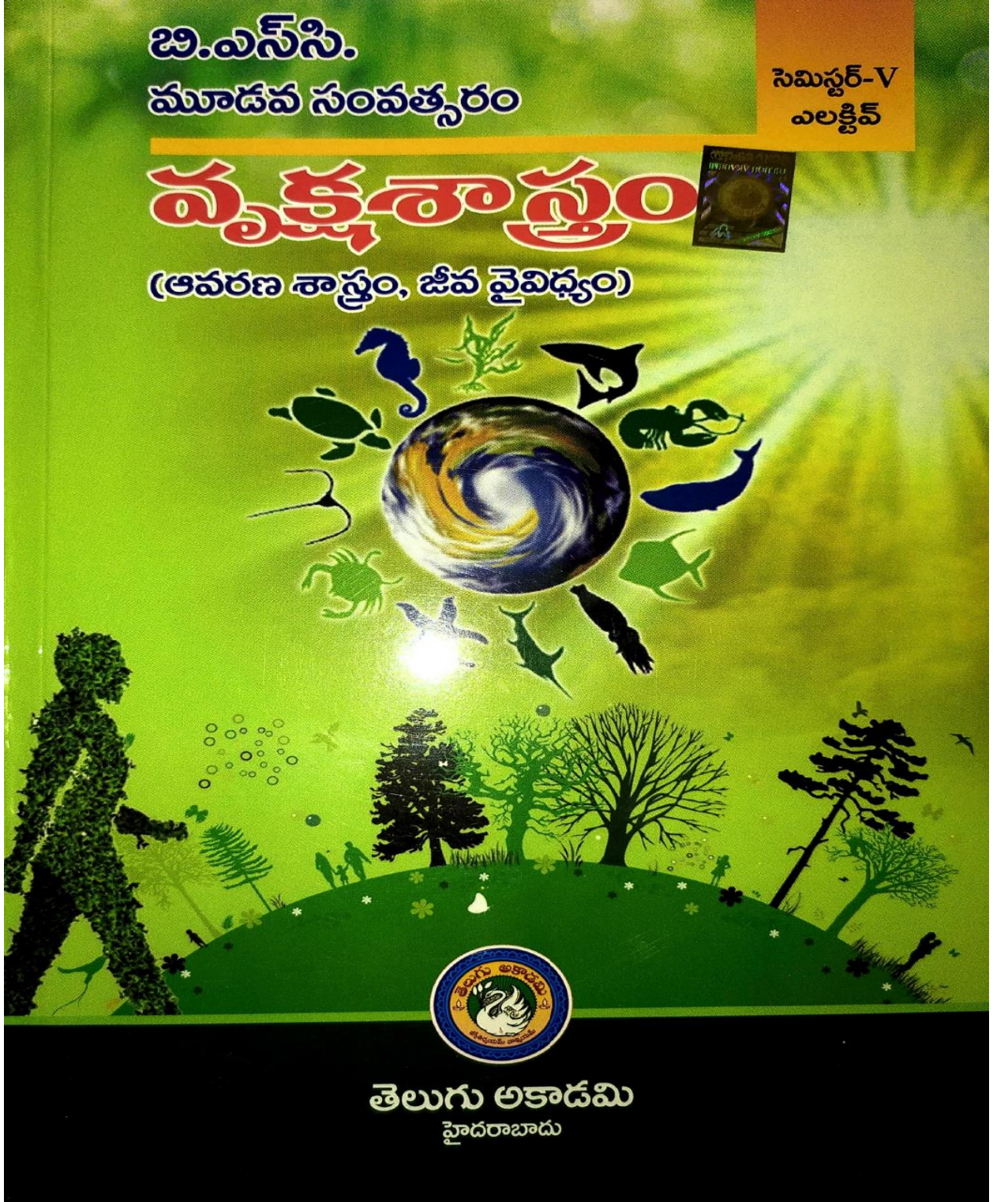
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4. Botany Sem V Elective Ecology and Biodiversity Telugu Medium.



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తెలుగు అకాడమి
హైదరాబాద్

విషయసూచిక

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బి.ఎన్.సి. మూడవ సంవత్సరం

వృక్షశాస్త్రం

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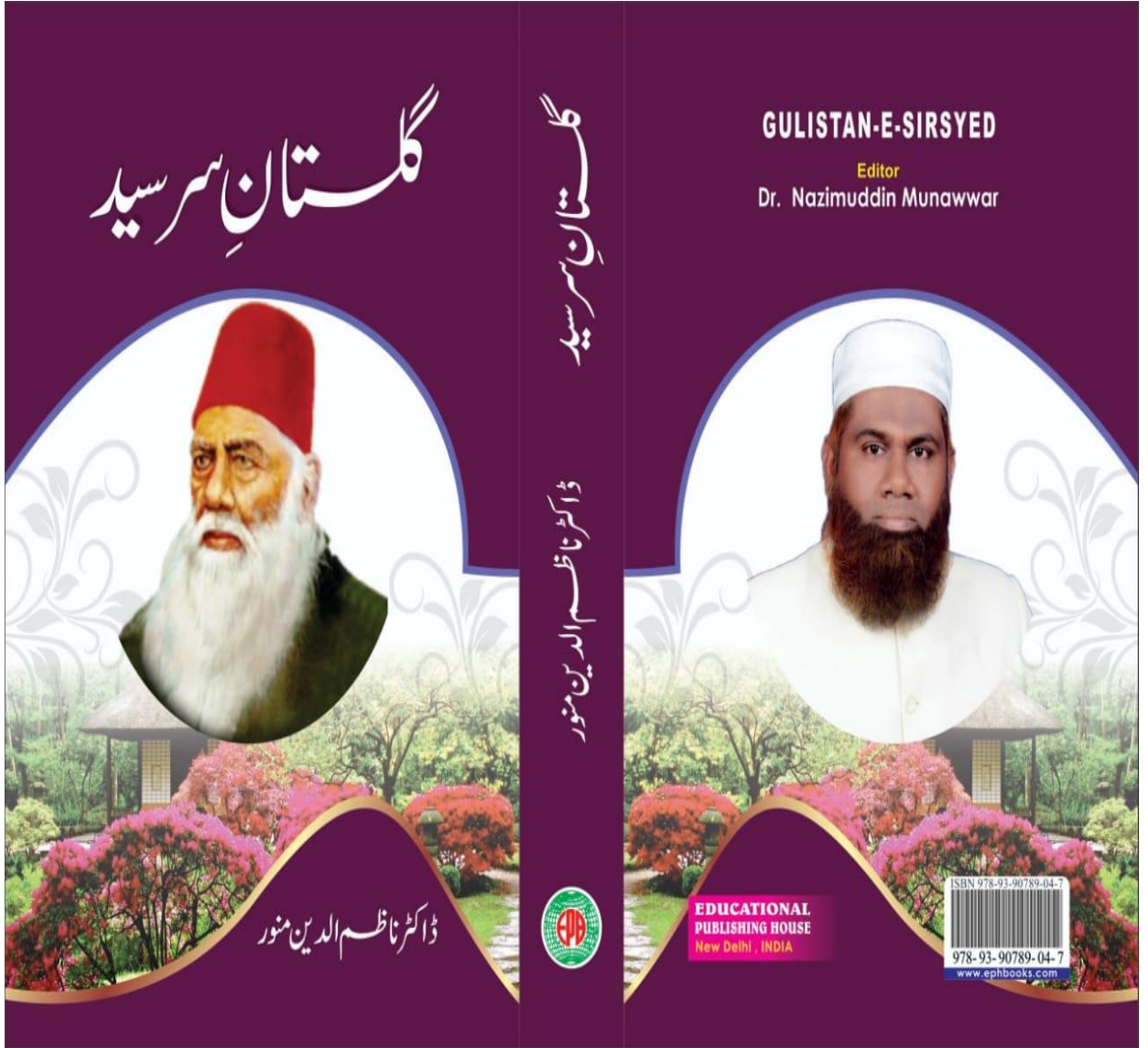
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5. Gulistan-e-Sirsyed.



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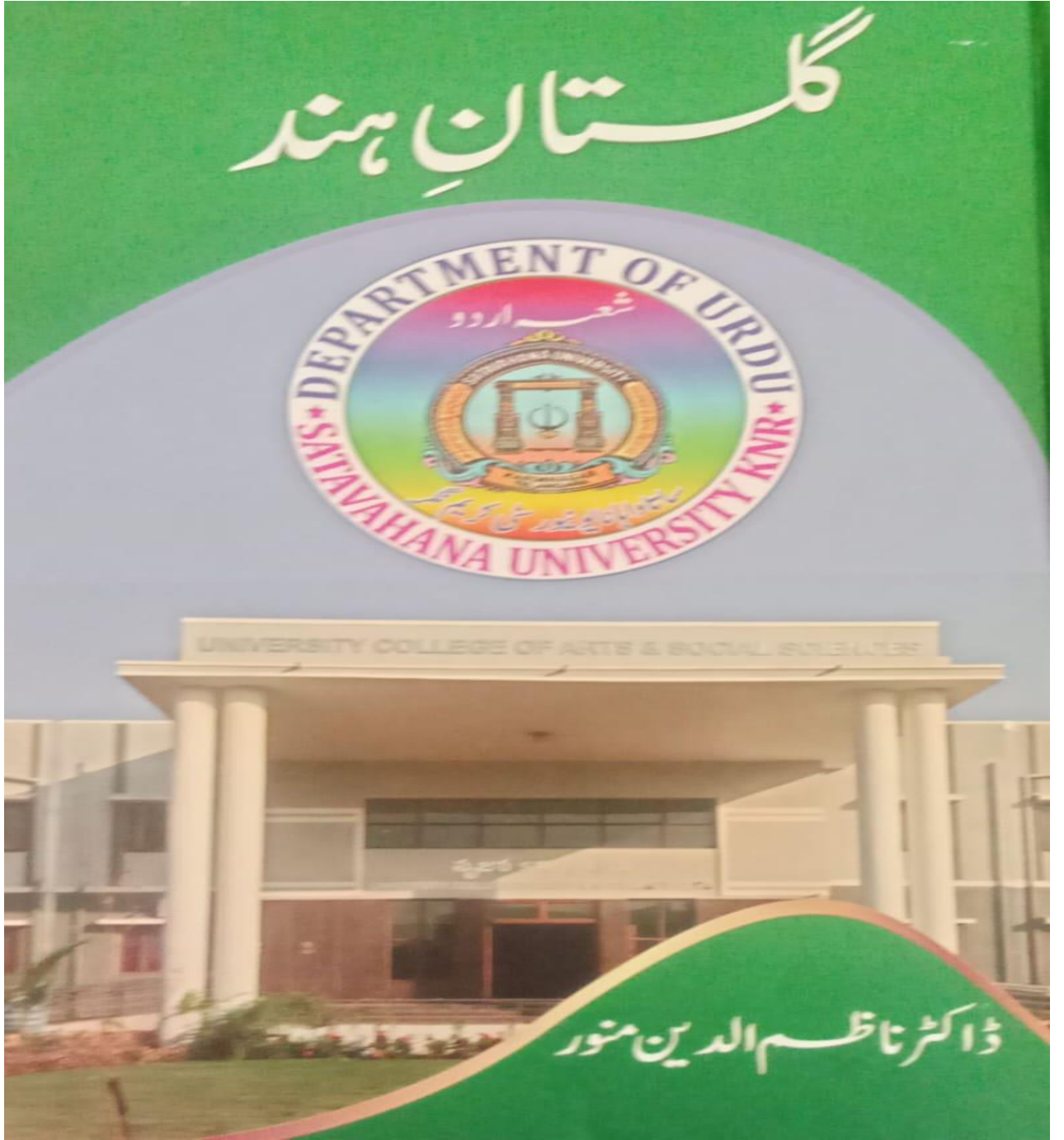
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286 ○ سرسید کی صحیفانہ فکر کی تشکیل و تعمیر اویس احمد بیٹ
289 ○ سرسید کی صحافتی خدمات اسما بیگم
292 ○ سرسید کی صحافتی خدمات محمد یوسف ساشی
295 ○ سرسید اور صحافت نسواں کلیم محی الدین
299 ○ موجودہ دور میں سرسید کے صحافتی کردار کی معنویت۔ محمد عباس دھالیول

باب پنجم:

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307 ○ سرسید اور اقبال مریم جیلہ
310 ○ سرسید اور شبلی مولانا ڈاکٹر محمد حامد ہلال اعظمی
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319 ○ سرسید اور ان کے رفقاء کار ڈاکٹر محمد مصعب انصاری

6. Gulistan-e-Hind.



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GULISTAN-E-HIND

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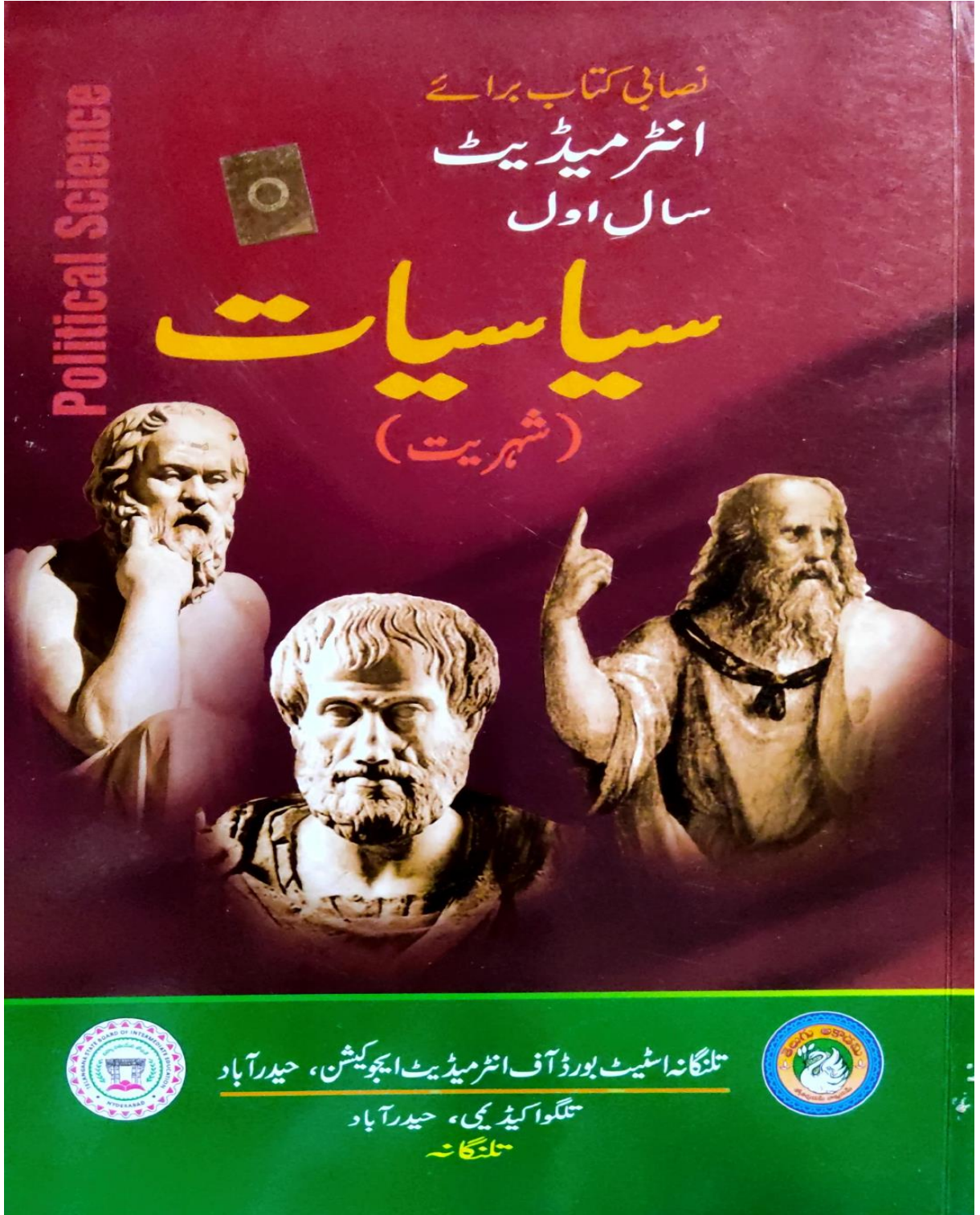
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7. Citizenship (chapter 7).



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