


(D. Pharm, B. Pharm & M. Pharm)

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3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five year

Sr. No.	Academic Year	Total Number
1	2023-24	05
2	2022-23	04
3	2021-22	04
4	2020-21	Nil
5	2019-20	Nil
Total		13



Principal
Shreeyash Institute Of Pharmaceutical
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MCQs Book D.Pharm EXIT EXAM 2024



Dr. Gajanan S. Sanap
Dr. Ganesh G. Tapadiya
Dr. Vitthal G. Kuchake
Ms. Pranali P. Hatwar



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MCQs Book D. Pharm Exit Exam 2024

870/-



ISBN 978-81-974578-3-



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PREFACE

Welcome to "Pharmaceutical Ponderings: A Comprehensive MCQ Guide"! Within these pages lie a treasure trove of knowledge meticulously curated to guide you through the intricate landscape of pharmaceutical studies. As burgeoning pharmacists, you are undoubtedly aware of the multifaceted nature of our discipline. It is not merely about memorizing facts and figures but rather about understanding the underlying principles that govern the world of pharmaceuticals. With this in mind, our team of experts has crafted a series of Multiple-Choice Questions (MCQs) designed to challenge your intellect and deepen your understanding.

Each question has been carefully constructed to test your comprehension of key concepts, from pharmacology and medicinal chemistry to pharmaceuticals and pharmacotherapy. Moreover, we have included detailed explanations for each answer, allowing you to grasp the rationale behind the correct choice and learn from any mistakes. Furthermore, we have ensured that our MCQs cover a wide array of topics, ranging from drug classification and pharmacokinetics to pharmacogenomics and clinical pharmacy. This comprehensive approach will not only prepare you for academic examinations but also equip you with the practical knowledge needed to excel in your future career as a pharmacist.

We understand that the journey to becoming a proficient pharmacist is paved with challenges, and it is our sincere hope that "Pharmaceutical Ponderings" will serve as a valuable companion along the way. Whether you are a novice student embarking on your educational odyssey or a seasoned professional seeking to refresh your knowledge, this book is designed to cater to your needs. In closing, I would like to extend my heartfelt gratitude to all those who contributed to the creation of this invaluable resource. Your dedication and expertise have undoubtedly enriched the field of pharmaceutical education.

Dr. Gajanan S. Sanap

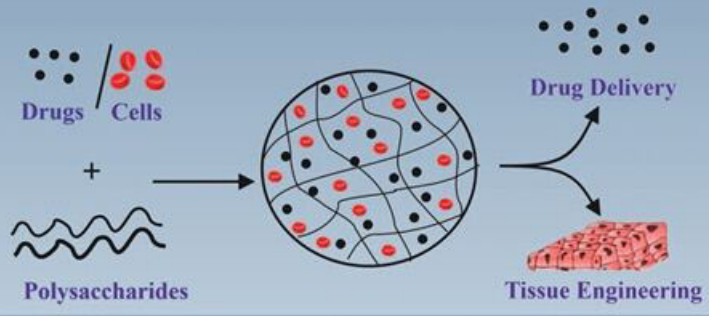
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Polysaccharide Hydrogels for Drug Delivery and Regenerative Medicine



Edited by

Tapan Kumar Giri
Bijaya Ghosh
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Hydrogels based on dextran

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8.1 Introduction to hydrogel

Hydrogels are the cross-linked polymeric, tri-dimensional (3D) hydrophilic polymeric structures which are insoluble in an aqueous medium [1]. They are composed of chemically or physically cross-linked hydrophilic polymers. These polymers possess hydrophilic moieties, which enhance the swelling and absorbing ability of a large amount of water [2]. The hydrophilic and porous network structure is synthesized in the presence of several hydrophilic moieties encompassing $-\text{OH}$, $-\text{CONH}_2$, $-\text{COOH}$, $-\text{SO}_3\text{H}$, $-\text{CONH}$, and $-\text{NH}_2$ [3,4]. Hence, they are known as hydrogels. Apart from high water absorption ability, they are responsive to various stimuli, including pH, ionic strength, electric field, chemical nature of a media, and temperature [5–7]. These hydrogels have flexibility, functionality, nontoxicity, elasticity, softness, and porosity [3]. Due to the porous structure, the hydrogel can be regulated by varying the density of cross-linking 3D network structure of the gel. The entrapment of lipophilic drugs and subsequent controlled release can be possible with slight modification in their structure. Enzymatic, hydrolytic, or environmental stimuli are the two methods by which the hydrogel can release drugs [8]. Hydrogel shows extraordinary properties owing to the extracellular matrix. In addition, hydrogel possesses properties such as swelling, drug-retaining capacity, ease of entrapment, biodegradability, biocompatibility, lack of efficacy, and simplicity. These properties are suitable for research like biomedical applications and tissue engineering [3]. Because of these unique characteristics, many researchers focus on biomedical research [9,10]. Further, owing to the 3D and shelter-like arrangement, the protein and cells can easily accommodate [10].

8.2 Dextran

8.2.1 Introduction

Dextran (DEX) is composed of glucopyranose units linked by glycosidic bonds (glu-1 \rightarrow 6), which may subsequently be branched by glycosidic bonds glu-1 \rightarrow 2), glu-1 \rightarrow 3), or glu-1 \rightarrow 4) linkage [11]. It is an exopolysaccharide (EPS) obtained from lactic acid bacteria (LAB). The chain has a molecular weight gradient between low (40 kDa) and high (>40 kDa). It has a wide range of qualities since the generating strain determines the molecular weight and branching of the polymer. Due to its solubility, viscosity, heat, and rheological attributes, it has excellent commercial interest in the food, pharmaceutical, and research industries. The low- and high-molecular-weight DEX can be synthesized by employing LAB. Studies have shown that the DEX can be obtained with specific chemical properties (branches and molecular weights) using specialized enzymes, which reveals their DEX-producing abilities and explores the possibility of using them to emulate a commercial strain. LAB obtained from unconventional sources is given special consideration (*Leuconostoc mesenteroides* NRRL B512) [11]. Lactic acid is produced by LAB as the primary or only byproduct of fermentation of carbohydrates. Acid-resistant gram (-ve), nonsporulating, catalase (-ve), cocci or rod-shaped, and having low guanidine cytosine content are typically immotile and commonly utilized. While, *Lactococcus*, *Carnobacterium*, and *Enterococcus*, many LAB species are nonpathogenic, have a widespread consensus, and are generally regarded as safe (GRAS) [12]. The dietary requirements are composite since they depend on elements like carbohydrates, amino acids, fatty acids, minerals, vitamins, and peptides frequently found in their natural environments [13]. Numerous bacteria and sugars exist in nature, and fermentation occurs in an anaerobic environment [11].



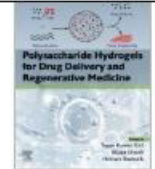
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Polysaccharide Hydrogels for Drug Delivery and Regenerative Medicine

2024, Pages 129-137



Chapter 8 - Hydrogels based on dextran

Pankaj V. Dangre¹, Vishal C. Gurumukhi², Satish S. Meshram³, Sankalp M. Zade¹

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<https://doi.org/10.1016/B978-0-323-95351-1.00016-8>

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Abstract

Dextran (DEX) is a natural polysaccharide composed of glucopyranose units linked by glucosidic bonds. It has a wide range of qualities since the generating strain determines the molecular weight and branching of the polymer. DEX is broadly employed in biomedical sciences owing to its biodegradability, relatively low cost, less toxicity, and simplicity in polymeric modification. Further, a DEX-based hydrogel has a broader interest, particularly in biomedical and pharmaceutical science. The chemical modifications in the polymeric chain offer multifunctional properties to the prepared hydrogel. In the current chapter, we have discussed the application of DEX in the preparation of hydrogel. Further, the interests of DEX-based hydrogel in the biomedical and pharmaceutical domains are also highlighted.

As Per PCI Regulations
First Year D. Pharm

SOCIAL PHARMACY



As per New Syllabus ER-2020

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Preface

Welcome to the "Textbook of Social Pharmacy for Diploma Students"! This concise yet comprehensive resource is tailored to equip aspiring pharmacists with essential knowledge about the societal aspects of pharmacy practice. From healthcare disparities to the pharmacist's role in public health, this textbook covers key topics to prepare diploma students for their journey in the field. I extend my gratitude to all contributors for their dedication. Dive in and explore the dynamic world of social pharmacy!

Best wishes,

Dr. Gajanan S. Sanap

Dr. Ganesh G. Tapadiya

Dr. Vitthal G. Kuchake

Ms. Pranali P. Hatwar

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ISBN: 978-81-971793-7-2

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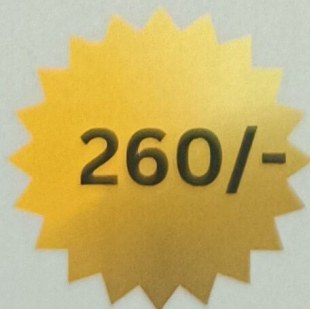
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Dr. Vitthal Gajanan Kuchake, currently serving as Principal at Shri Sai Janvikas Pratishthan's OJAS College of Pharmacy, Jalna, boasts 18 years of pharmacy expertise. With over 50 research papers published in both national and international journals, he demonstrates a profound understanding of pharmaceutical sciences. Dr. Kuchake's innovative spirit is evident through his seven patents, highlighting his commitment to pioneering solutions in healthcare. Additionally, he has authored seven books, enriching the academic landscape. His leadership ensures the college remains a beacon of innovation and excellence, shaping the next generation of pharmacy professionals and advancing pharmaceutical sciences.



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ISBN 978-81-971793-7-2



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Dr. Ganesh G. Tapadiya
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Practical Handbook of Herbal Drug Technology

As per PCI Syllabus B. Pharm Sem VI



Practical Handbook of Herbal Drug
Technology

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Publisher

Kailas R. Patil

Pritam Publications

University Road, NH-06,

Near Jain Mandir, Dadawadi,

JALGAON - 425001 (M. S.), INDIA.

Mob. 9850222351



Edition - 2023

Type Settings -

Pritam Publications, Jalgaon.

Printer -

Shree Morya Offset, Dharangaon,

Dist. Jalgaon.

Price - 110/-

ISBN- 978-93-5735-954-2

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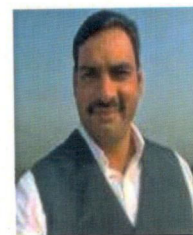
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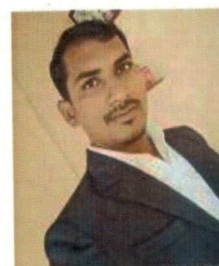
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ISBN: 978-93-6087-526-8

Price: 519.00

Publishing Year 2023

Published and printed by:

Shashwat Publication

Office Address: Ram das Nagar,

Bilaspur, Chhattisgarh – 495001

Phones: +91 9993608164 +91 9993603865

Email: contact.shashwatpublication@gmail.com

Website: www.shashwatpublication.com

Printed in India

Table of Contents

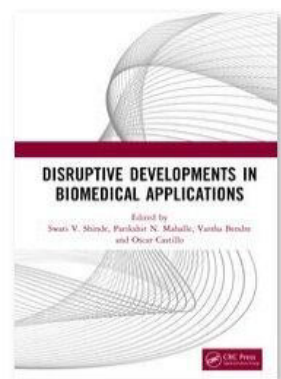
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Pallavi Bhosle, Hujeb Pathan, Ganesh Tapadiya, and Md. Irshad Alam

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Case Study on Oropharyngeal Cancer Prediction and Diagnosis and Management Based upon MRI, CT Scan Imaging Techniques

By **Pallavi Bhosle**, Hujeb Pathan, Ganesh Tapadiya, Md. Irshad Alam

Book [Disruptive Developments in Biomedical Applications](#)

Edition	1st Edition
First Published	2022
Imprint	CRC Press
Pages	16
eBook ISBN	9781003272694



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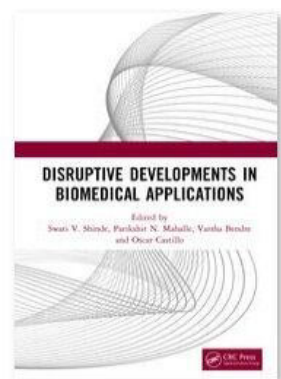
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Book [Disruptive Developments in Biomedical Applications](#)

Edition	1st Edition
First Published	2022
Imprint	CRC Press
Pages	16
eBook ISBN	9781003272694



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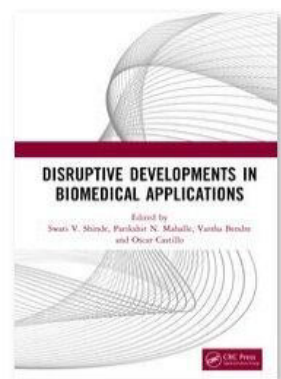
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7 Case Study on Oropharyngeal Cancer Prediction and Diagnosis and Management Based upon MRI, CT Scan Imaging Techniques

Pallavi Bhosle, Hujeb Pathan, Ganesh Tapadiya, and Md. Irshad Alam

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Chapter

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By *Pallavi Bhosle*, **Hujeb Pathan**, *Ganesh Tapadiya*, *Md. Irshad Alam*

Book [Disruptive Developments in Biomedical Applications](#)

Edition	1st Edition
First Published	2022
Imprint	CRC Press
Pages	16
eBook ISBN	9781003272694



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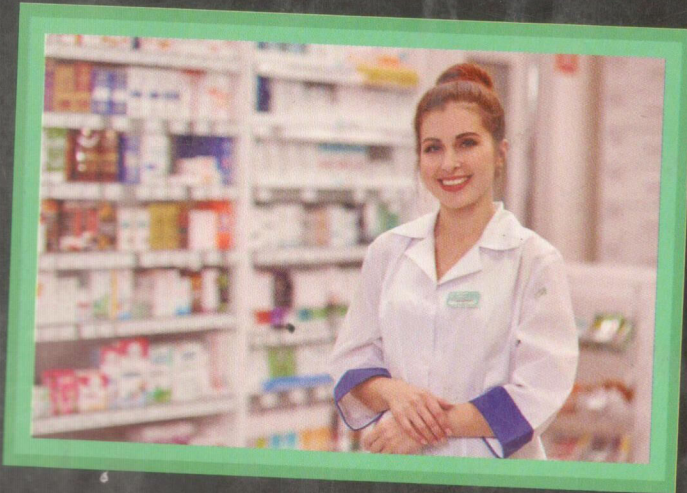
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Vadodara, Maharashtra

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PRODUCTION : ND-226, TANDA ROAD, JALANDHAR CITY-144 008 (PUNJAB), INDIA

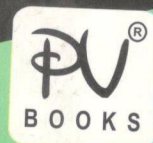
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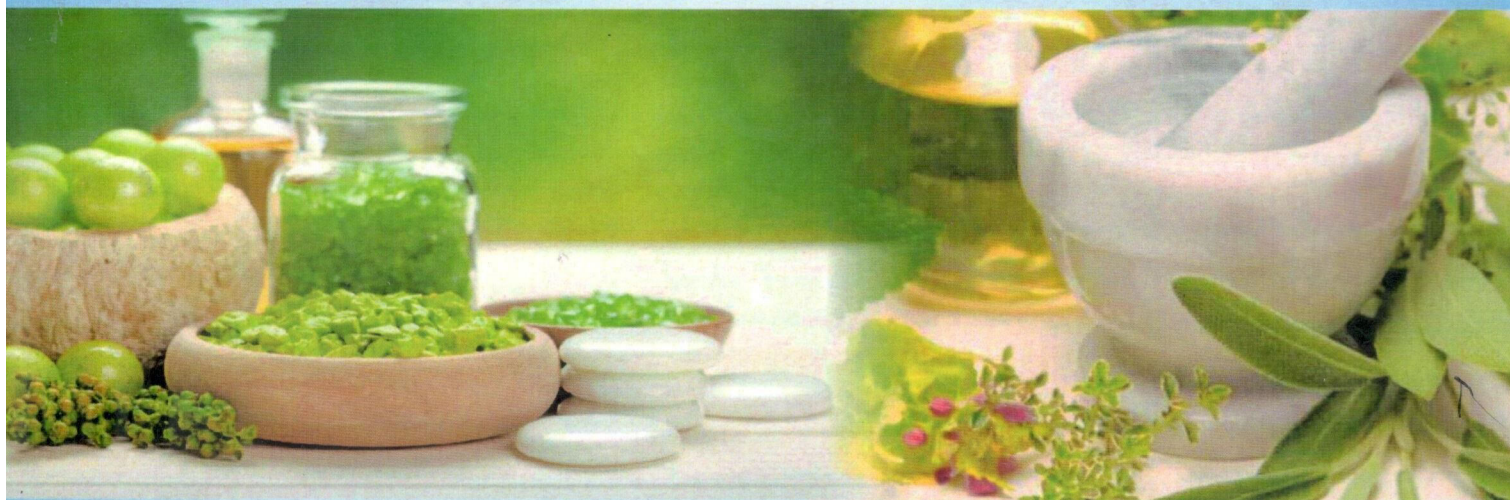
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- **Mr. Madhav D. Chakolkar**
- **Dr. Shweta S. Saboo**
- **Mrs. Arundhati Deokar**
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Publisher

Kailas R. Patil
Pritam Publication
University Road, NH-06,
Near Jain Mandir, Dadawadi,
Jalgaon (M. S.), INDIA.
Mob. 9850222351



Edition - 2022

Type Settings -

Pritam Publications, Jalgaon.

Printer -

Shree Morya Offset, Dharangaon,
Dist. Jalgaon.

Price- 280/-

ISBN 978-93-92159-04-6

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Publisher

Kailas R. Patil
Pritam Publication
University Road, NH-06,
Near Jain Mandir, Dadawadi,
Jalgaon (M. S.), INDIA.
Mob. 9850222351



Edition - 2022

Type Settings -

Pritam Publications, Jalgaon.

Printer -

Shree Morya Offset, Dharangaon,
Dist. Jalgaon.

Price- 280/-

ISBN 978-93-92159-04-6

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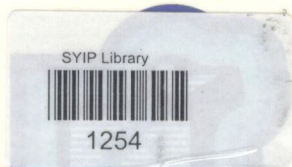
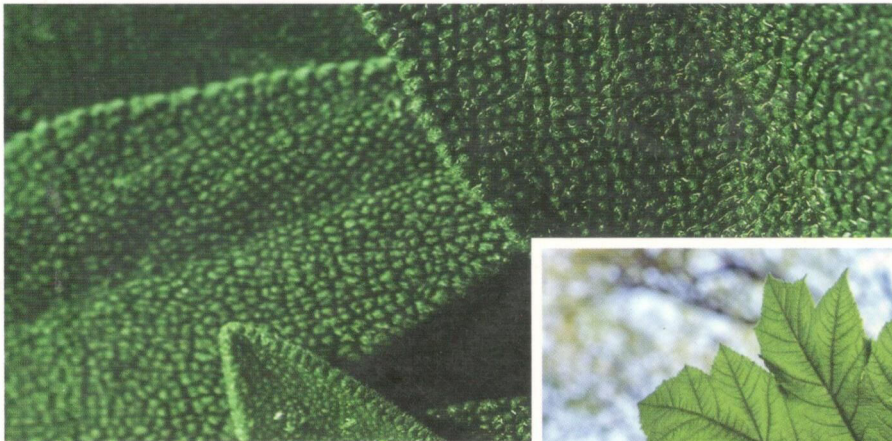
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