# **DEPARTMENT OF CHEMISTRY**

### **CERTIFICATE COURSE ON**

### ACADEMIC YEAR

2020-2021



**GOVERNMENT DEGREE COLLEGE** 

PALAKONDA

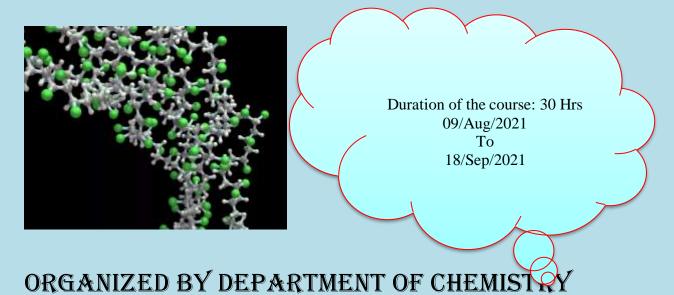
SRIKAKULAM DISTRICT





## GOVERNMENT DEGREE COLLEGE-PALAKONDA PARVATHIPURAM MANYAM DISTRICT

### CERTIFICATE COURSE ON SIGNIFICANCE OF POLYMER



Sri.S. <u>Instruction to the Students :</u> • 75 % of course attendance Kum.M

- 75 % of course attendance compulsory to get the certificate.
- Students who will get 40 % of marks in the examination they will eligible to get certificate.

Sri.S.Jaganmohana Rao, ( Course Coordinator) Kum.M.Prasanthi (Faculty)

### GOVERNMENT DEGREE COLLEGE- PALAKONDA DEPARTMENT OF CHEMISTRY

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Palakonda, Date:03/08/21

To The Principal, Govt. Degree College, Palakonda, Parvathipuram Manyam District

Respected sir,

We, the faculty members of Department of Chemistry submit your notice that we would like to conduct a Certificate course on "Significance of Polymer" for B.Sc. students with the duration of 30 hr's

Hence we humbly request you to accord permission to initiate the certificate course in our department.

Thanking you sir,

Yours faithfully,



### GOVERNMENT DEGREE COLLEGE-PALAKONDA DEPARTMENT OF CHEMISTRY

**CIRCULAR** 

Date: 04/08/2021

The Department of Chemistry is planning to conduct a certificate course on " Significance of Polymer" for B.Sc. students. Hence the interested candidates are advised to meet the In-charge or other faculty members of Department of Chemistry.

Participation/merit certificate will be issued to individual after completion of the course.

Lecturer in-charge Department of Chemistry

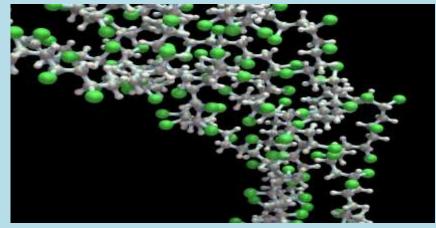
Degree College PALAKONDA Srikakulam (Dist.)

Principal GDC, Palakonda

## **DEPARTMENT OF CHEMISTRY**

## **CERRTIFICATE COURSE ON**

## **SIGNIFICANCE OF POLYMER**



### 2021-2022

### **GOVERNMENT DEGREE COLLEGE**

## PALAKONDA



SRIKAKULAM DISTRICT

Sri S. Jagan Mohan Rao

Sri B. Prasada Rao PRINCIPAL

**COURSE COORDINATOR** 

#### **INTRODUCTION :**

Polymers are very large molecules compared to water. They have many more atoms than a water molecule--from 10,000 to 100,000 atoms per molecule. The word polymer is derived from the Greek root poly-, meaning many, and mer, meaning part or segment. Many of the same units (or mers) are connected together to form a long chain or polymer. Because they can be extremely large, often made up of hundreds of thousands of atoms, polymers are also referred to as macromolecules.

Polymers are made up of smaller repeating units, called monomers, which are linked together by covalent bonds. The polymerization processes by which polymers are synthesized fall into two categories. Addition polymers are formed by addition reactions that link together monomers containing multiple bonds.

#### **OBJECTIVIES :**

- Develop intellectual breadth and depth in polymer science and engineering and to have specialized training for career in teaching, research and industry
- reduce the volume of waste in packaging materials.
- describe the typical features and biomedical uses of polyamides.

#### **OUT COMES :**

- After studying this course, Student should be able to understand the key design features of a product which relate directly to the materials used in its construction.
- Recognizes bounds between polymer chains.
- use essential descriptions about polymer chemistry.
- Defines related concepts.
- Recognizes monomers land polymers.
- evaluate the structure of polymers.
- Recognizes bounds between polymer chains.

#### GENERAL INFORMATION AND COURSE STRUCTURE

- 1. Duration of module Training: 30 hrs
- 2. Entry Qualification: B.Sc. students
- 3. Language: English/ Telugu
- 4. Teaching mode: Offline .

#### Distribution of training on hourly

basis:

S. No	Components to be covered	Duration	Theory	Days
1	Introduction and classification of Polymers	2	2	2
2	Structure and properties of polymer	9	9	9
3	Types of Polymers	9	9	9
4	Uses of Polymers	9	9	9
5	Review and Assessment	1	1	1
	Total	30	30	30

Syllabus :

- Introduction and Classification of Polymers
- Structure, Properties of polymers
- > Types of polymers
- ➢ Uses of Polymers

#### **INSTRUCTION METHODS**

Some of the following method of delivery may be adopted

- 1. Lecture
- 2. Video lesson
- 3. Demonstrations
- 4. Group discussions

#### ASSESSMENT

- 1. Assignments: 40%
- 2. Course End Examination: 60%

Assessment Mode: Descriptive and multiple-choice

answers Examination conduction: Offline

The syllabus for value added course on "Significance of polymer" is hereby approved for the session 2021-22.

#### GOVERNMENT DEGREE COLLEGE-PALAKONDA DEPARTMENT OF CHEMISTRY Course : Analytical Techniques in Chemistry Course End Examination, April - 2021

Duration:2 hrs

Max.Marks:30

PART-A	
Answer any four of the following questions	4x5=20 Marks
<ol> <li>Write the terminology in Pharmaceutical Chemistry?</li> <li>Write Nomenclature of Drugs?</li> <li>Write the classification of drugs based on Therapeutic activity?</li> <li>Describe about Administration of Drugs?</li> <li>Write the synthesis and therapeutic activity of paracetamol?</li> </ol>	
PART-B	
Answer the all following questions	10x1=10 Marks
Chemical name of Aspirin     Trade names for paracetamol     Give one example for Oral Drug     GTN acts asDrug.	
5Nylon threads are made of	( )
<ul> <li>a. polyester polymer b. polyamide polymer c. polyethylene polymer d. polyester of the following is a branched polymer?</li> <li>a. low density polymer b. polyester c. high density polymer d. nylon</li> <li>7. On the basis of mode of formation polymers can be classified:</li> </ul>	olyvinyl polymer ( ) ( )
<ul> <li>a .as addition polymers only</li> <li>b. as condensation polymers only</li> <li>c . as copolymers</li> <li>d. as addition and condensation polymers</li> <li>8. The process of heat softening, molding and cooling to rigidness can be repeated</li> <li>( )</li> </ul>	for which plastics?
<ul><li>a. Thermoplastics b. thermosetting plastics c. both (a) and (b) d. neither (</li><li>9. In addition polymer, monomer used is</li></ul>	a) nor (b) ( )
<ul> <li>a. unsaturated compounds</li> <li>b. saturated compounds</li> <li>c. bifunctional saturated compounds</li> <li>d. trifunctional saturated compounds</li> </ul>	
10. Out of the following polymers, which one does not involve cross-linkages?	( )

a. Vulcanized Rubber b. Polythene c. Melamine d. Bakelite

Registrations		21
IND NAME OF THE STUDENT	COURSE YEAR / COURSE GROUP	DATE OF SIGNATURE OF THE REGISTRATION CANDIDATE
1 Gurubilli Deepika		5/8/2021 G. Deepika
2 Mabanthé Kalyani	1st c.BZ	5/8/2021 Ms Kalyani
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