

M.Sc Sem.-2 Examination

P - 410

Polymer Science

June 2022

Time : 2-00 Hours]

[Max. Marks : 50

Instructions: All questions in **Section – I** carry equal marks.
Attempt any **Three** Questions in **Section – I**.
Questions I in **Section II** is **Compulsory**.

Section – I

Q-I	A	What are Polyphosphozenes? Write the method to synthesize Polyphosphozenes in detail.	07
	B	What are Zeolites? Describe types of zeolites in detail.	07
Q-II	A	Elaborate the term Organo-metallic.	07
	B	Describe the theme of inorganic and organometallic polymers used in the polymer chemistry.	07
Q-III	A	Explain synthesis, important structural characteristic, properties and applications of boron nitride.	07
	B	Explain synthesis, important structural characteristic, properties and applications of Glass silicates.	07
Q-IV	A	Give detailed Comparison of Organic polymers with Inorganic polymers.	07
	B	Give detailed synthesis method, properties, structure and applications of Polysiloxanes.	07
Q-V	A	Explain the synthesis, properties, structure and applications of Polysilanes.	07
	B	Write a note on: (a) Fluorocarbon polymers (b) Polymeric Sulphur	07
Q-VI	A	Explain synthesis and important structural characteristic and properties and applications of boron carbide.	07
	B	Describe the term Mineralogical type inorganic polymers in detail.	07
Q-VII	A	Describe the term Polymeric sulfur, silicone polymers and silicone carborane polymers in brief.	07
	B	Write a note on Polymeric Carbon.	07
Q-VII	A	Explain natural inorganic polymers along with their properties and applications.	07
	B	Explain synthetic inorganic polymers in detail.	07

Section – II

Q-IX		MCQs	
01		Which of the following is Natural Inorganic Polymer?	08
	A	Sand	01
	B	Clay	
	C	Asbestos	
	D	All of these above	
02		Which of the following is the property of Asbestos?	01
	A	Electrical resistance	
	B	Good tensile strength	
	C	Chemical resistance	
	D	All of these above	

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03		Which of the following material is used to make tank armor and bulletproof vests?	01
	A	Boron Carbide	
	B	Polysiloxanes	
	C	Zeolites	
	D	Asbestos	
04		Which polymers contain carbon and fluorine bond.	01
	A	PVC	
	B	PTFE	
	C	PET	
	D	PVC	
05		"An inorganic product of fusion which has cooled to a rigid condition without crystallizing called...."	01
	A	Glass	
	B	Asbestos	
	C	Metal	
	D	None of the above	
06		Combination of the organic and inorganic polymers are called _____	01
	A	Thermoplastics	
	B	Fibres	
	C	Element organic polymers	
	D	Inorganic polymers	
07		The catalyst is used in the preparation of polysiloxanes is _____	01
	A	Benzoyl peroxide	
	B	Grignard reagent	
	C	Lewis acid	
	D	Cumene hydroperoxide	
08		Silicones are called inorganic polymers due to absence of _____ in the main backbone chain.	01
	A	Nitrogen atom	
	B	Oxygen atom	
	C	Carbon atom	
	D	Hydrogen atom	

—X—