Code No: R201215 **R20** SET - 1

I B. Tech II Semester Regular/Supplementary Examinations, August- 2022

APPLIED CHEMISTRY

(Com. To CSE, CSE-CS&T, IT, CSE-CS, CSE-IOT&CS Incl BCT, CSE-CS&BS, CSE-IOT, Cyber Security**)**

Time: 3 hours Max. Marks: 70

Answer any five Questions one Question from Each Unit
All Questions Carry Equal Marks

UNIT-I

1.	a)	Write about Compounding of plastics.	(7M)
	b)	Explain Recycling of E- plastic waste.	(7M)
		Or	
2.	a)	Discuss briefly about biodegradable polymers.	(7M)
	b)	Write Synthesis, properties and applications of Bakelite.	(7M)

UNIT-II

3.	a)	Give an account on Electrochemical series and Uses.	(7M)
	b)	Explain construction and working principle of calomel electrode .	(7M)
		Or	
4.	a)	Explain electroplating and electro less plating.	(7M)
	b)	Discuss Electrochemical corrosion with a neat diagram.	(7M)

UNIT-III

5.	a)	Explain Zone reefing method with a neat diagram.	(7M)
	b)	Explain Types of carbon Nanotubes and applications.	(7M)
		Or	
6.	a)	Give a brief account on Hall effect and its applications.	(7M)
	b)	Discuss about types of liquid crystals and its applications.	(7M)

UNIT-IV

7.	a)	Discuss about Laws of absorption in UV-Spectroscopy.	(7M)
	b)	Explain Frank-condon principle.	(7M)
		Or	
8.	a)	Design, working, schematic diagram, advantages of Photovoltaic cell.	(7M)
	b)	Explain briefly on hydropower with schematic diagram.	(7M)

UNIT-V

9.	a)	Explain Molecular modeling and its applications.	(7M)
	b)	Discuss briefly on molecular switches.	(7M)
		Or	
10.	a)	Give an Introduction to computational chemistry.	(7M)
	b)	Explain catenanes as artificial molecular machines.	(7M)

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Code No: R201215 **R20** SET - 2

I B. Tech II Semester Regular/Supplementary Examinations, August- 2022

APPLIED CHEMISTRY

(CSE, CSE-CS&T, IT, CSE-CS, CSE-IOT&CS Incl BCT, CSE-CS&BS, CSE-IOT, Cyber Security)

Time: 3 hours Max. Marks: 70

Answer any five Questions one Question from Each Unit
All Questions Carry Equal Marks

UNIT-I

1. a) Write about Emulsion Polymerization method. (7M)
   b) Explain Recycling of E- plastic waste. (7M)

Or

2. a) Discuss briefly about biodegradable polymers. (7M)
   b) Write Synthesis, properties and applications of polyurethanes. (7M)

UNIT-II

3. a) Give an account on Galvanic series and Uses. (7M)
   b) Explain working principle of standard Hydrogen electrode. (7M)

Or

4. a) Explain electroplating and electro less plating. (7M)
   b) Discuss about protective coatings and its advantages. (7M)

UNIT-III

5. a) Explain Zone reefing method with a neat diagram. (7M)
   b) Explain Types of carbon Nanotubes and applications. (7M)

Or

6. a) Explain different types of superconductors and its applications. (7M)
   b) Discuss about types of liquid crystals and its applications. (7M)

UNIT-IV

7. a) Discuss on UV-Visible spectroscopy. (7M)
   b) Explain Instrumentation of UV-Visible spectroscopy. (7M)

Or

8. a) Design, working, schematic diagram, advantages of Ocean thermal energy. (7M)
   b) Explain briefly on hydropower. (7M)

UNIT-V

9. a) Explain Molecular docking studies and its applications. (7M)
   b) Discuss briefly on molecular switches. (7M)

Or

10. a) Give Introduction to computational chemistry. (7M)
    b) Explain Rotoxanes as artificial molecular machines. (7M)

Code No: R201215 **R20** SET - 3

I B. Tech II Semester Regular/Supplementary Examinations, August- 2022

APPLIED CHEMISTRY

(CSE, CSE-CS&T, IT, CSE-CS, CSE-IOT&CS Incl BCT, CSE-CS&BS, CSE-IOT, Cyber Security)

Time: 3 hours Max. Marks: 70

Answer any five Questions one Question from Each Unit
All Questions Carry Equal Marks

UNIT-I

1.	a)	Write any two methods to Fabrication of plastics.	(7M)
	b)	Explain Recycling of E- plastic waste.	(7M)
		Or	
2.	a)	Discuss briefly about biodegradable polymers.	(7M)
	b)	Write Synthesis, properties and applications of Bakelite.	(7M)

UNIT-II

3.	a)	Give an account on Electrochemical series and Uses.	(7M)
	b)	Explain working principle of calomel electrode.	(7M)
		Or	
4.	a)	Explain electroplating and electro less plating.	(7M)
	b)	Discuss Electrochemical corrosion with a neat diagram.	(7M)

UNIT-III

5.	a)	Explain Czochralski crystal pulling technique.	(7M)
	b)	Give a brief account on controlled valency and chalcogen semiconductrors.	(7M)
		Or	
6.	a)	Fuel cells and its applications.	(7M)
	b)	Write about types of magnetic materials and its applications.	(7M)

UNIT-IV

7.	a)	Write instrumentation of FT-IR spectroscopy and its applications.	(7M)
	b)	Explain Frank-condon principle.	(7M)
		Or	
8.	a)	Design, working, schematic diagram, advantages of Photovoltaic cell.	(7M)
	b)	Explain briefly on hydropower with schematic diagram.	(7M)

UNIT-V

9.	a)	Explain Molecular modeling and its applications.	(7M)
	b)	Discuss briefly on molecular switches.	(7M)
		Or	
10.	a)	Give Introduction to computational chemistry.	(7M)
	b)	Explain catenanes as artificial molecular machines.	(7M)

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Code No: R201215 **R20** SET - 4

I B. Tech II Semester Regular/Supplementary Examinations, August- 2022

APPLIED CHEMISTRY

(CSE, CSE-CS&T, IT, CSE-CS, CSE-IOT&CS Incl BCT, CSE-CS&BS, CSE-IOT, Cyber Security)

Time: 3 hours Max. Marks: 70

Answer any five Questions one Question from Each Unit
All Questions Carry Equal Marks

UNIT-I

1.	a)	Explain Compression and injection moulding of plastics.	(7M)
	b)	Explain Recycling of E- plastic waste.	(7M)
		Or	
2.	a)	Discuss briefly about biodegradable polymers.	(7M)
	b)	Write Synthesis, properties and applications of Bakelite.	(7M)

UNIT-II

3.	a)	Give an account on Electrochemical series and Uses.	(7M)
	b)	Explain working principle of calomel electrode.	(7M)
		Or	
4.	a)	Explain electroplating and electro less plating.	(7M)
	b)	Discuss Electrochemical corrosion with a neat diagram.	(7M)

UNIT-III

5.	a)	Explain Zone reefing method.	(7M)
	b)	Write about Czochralski crystal pulling method.	(7M)
		Or	
6.	a)	Distinguish primary and secondary batteries with examples.	(7M)
	b)	Discuss about types of liquid crystals and its applications.	(7M)

UNIT-IV

7.	a)	Discuss on magnetic resonance imaging (MRI) Scanning.	(7M)
	b)	Explain Frank-condon principle.	(7M)
		Or	
8.	a)	Design, working, schematic diagram, advantages of Photovoltaic cell.	(7M)
	b)	Explain briefly on geothermal Power.	(7M)

UNIT-V

9.	a)	Explain Molecular modeling and its applications.	(7M)
	b)	Discuss briefly on molecular motors.	(7M)
		Or	
10.	a)	Explain the importance of computational chemistry..	(7M)
	b)	Explain rotoxanes as artificial molecular machines.	(7M)