GBCS SCHEME

USN

18NT36

Third Semester B.E. Degree Examination, July/August 2021 Synthesis and Processing of Nanomaterials

Time: 3 hrs.

Max. Marks: 100

(10 Marks)

(10 Marks)

Note: Answer any FIVE full questions.

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1	a.	Explain ball milling synthesis of nanoparticles.	(10 Marks)
	b.	Write a note on Langmuir-Blodget method.	(10 Marks)
2	a.	Explain radio frequency plasma method of synthesis of nanomaterials.	Mention its
		advantages and applications.	(06 Marks)
	b.	Write a note on plasma arc technique.	(04 Marks)
	c.	Explain ion sputtering method.	(10 Marks)
3	a.	Write a note on: (i) Chemical precipitation method (ii) Co-precipitation metho	.1
J	ч.	(iii) Arrested precipitation method.	
	b.	Discuss how microemulsions used for synthesis of nanoparticles.	(10 Marks)
	J.	Discuss now ameroemuisions used for synthesis of nanoparticles.	(10 Marks)
4	a.	With synthesis of Ag nanoparticles as example, describe about chemical reduc	ction method
		and photochemical synthesis of chalcogenides.	(10 Marks)
	b.	Explain hydrothermal synthesis, and solution combustion synthesis of nanopartic	cles
			(10 Marks)
5	a.	Explain spray pyrolysis and flame spray pyrolysis methods of synthesis of nanop	
		To a figure and the state of th	(10 Marks)
	b.	Explain the gas condensation process.	(10 Marks)
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6	a.	Describe VLS method.	(10 Marks)
		Explain chemical vapour condensation process.	(06 Marks)
	c.	Explain SLS method.	(04 Marks)
7	a.	Explain microbial synthesis of nanoparticles.	(40.5.5
,		Explain the synthesis of nanoparticle using Fungi.	(10 Marks)
	O.	Displain the synthesis of manoparticle using rungi.	(10 Marks)
8	a	Discuss about the procedure of synthesis of nanoparticles by actinomycetes.	(10 M 1)
Ū	b.	Write a note on synthesis of nanoparticles using protein and DNA templates.	(10 Marks)
		templates.	(10 Marks)
9	a.	Brief about surface modifications of inorganic nanoparticles by organic function	onal groups
		Tunction of morganic number lies by organic function	(10 Marks)
	b.	Explain the fabrication technique of organic nanocrystals.	(10 Marks)
4.0			
10	a.	Explain the instantaneous nano foaming method for fabrication of closed po	rosity silica

2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8=50, will be treated as malpractice. Important Note: 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.

particles.

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nanocoating for their applications in cosmetics.

b. Discuss about nanoparticles in emulsion, nanoparticles in dispersed system and functional