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Question Paper Code: 52108

M.E. DEGREE EXAMINATION, NOV 2016

Elective

CAD / CAM

15PCD521 - SYNTHESIS AND CHARACTERIZATION OF NANO MATERIALS

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

(5 x 20 = 100 Marks)

1. (a) Briefly explain the principles of Inert gas condensation technique. (20)

Or

(b) Explain in detail about nano composite materials. (20)

2. (a) Discuss in detail about Self-Assembled Monolayers (SAMs). (20)

Or

(b) List the electrochemical approaches used for synthesis of nano materials and explain any two methods in detail. (20)

3. (a) Explain in detail about micromachining. (20)

Or

(b) What is meant by micro lithography and explain in detail about photolithography and soft lithography. (20)

4. (a) With neat sketch explain the synthesis of carbon nano tubes. (20)

Or

- (b) What are Nanoporous materials? Explain its various types with applications. (20)
5. (a) With the aid of a neat sketch explain the principles of scanning electron microscope. (20)

Or

- (b) Explain in detail about optical spectroscopy for semi conductor nano particles and give its advantages. (20)
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