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**Question Paper Code: 95P25**

Ph.D. COURSE WORK EXAMINATION, NOV 2019

Elective

CAD/CAM

19PCD525- SYNTHESIS AND CHARACTERIZATION OF NANO MATERIALS

(Regulation 2019)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1. (a) Generalize the effects of length scales involved and effect on CO1- U (20)  
properties in nanoparticles.

Or

- (b) Explain the properties ,synthesis methods and applications of ultra- CO1- U (20)  
thin films and multi-layered materials.

2. (a) Explain in detail about the working principle of mechanical milling CO2- U (20)  
process and mention its merits and demerits.

Or

- (b) Summarize in detail about the working of MOMBE. CO2- U (20)

3. (a) With relevant examples and mechanisms, explain in details the CO3- U (20)  
recent advances in SWCNT growth control.

Or

- (b) Give the preparation, properties, and applications of quantum wires. CO3- U (20)

4. (a) Explain the working of Scanning Electron Microscopy (SEM) with CO4- U (20)  
a neat sketch.

Or

- (b) Explain in detail about the X-Ray diffraction technique to prepare CO4- U (20)  
Nano materials.

5. (a) How Nano silver crystalline used for Bacterial inhibition. CO5-U (20)

Or

(b) Give details about MEMS and NEMS and compare it. CO5-U (20)

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