

Reg. No. :

| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|

Question Paper Code: 53968

Ph.D COURSE WORK EXAMINATION, MAY 2017

Elective

Technology

15PPH112 - NANOCOMPOSITIES

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 20 = 100 Marks)

1. (a) Describe in detail the different preparation techniques of ceramic composite material. (20)

Or

- (b) Define ceramic Composites? Write the different properties and functionality of ceramic composite materials. (20)

2. (a) Write a notes on simple preparation techniques for metal- metal nanocomposite with suitable example. (20)

Or

- (b) Describe about the electrical and magnetic properties of metal-metal nanocomposite. (20)

3. (a) What are super hard Nano composites? Explain its structure and properties. (20)

Or

- (b) Explain the various properties of super hard Nano composites and how mechanical properties can be improved. (20)

4. (a) Classify the glass-metal nanocomposite and explain any one of the method of preparation with neat diagram. (20)

Or

- (b) What are the Core-shell structured nanocomposite? Explain the design and Electrical property of fractal based nanocomposite. (20)
5. (a) Define carbon nanotubes? Explain the preparation and characterization of diblock co-polymer based nanocomposites. (20)

Or

- (b) Explain about their mechanical properties and industrial applications of carbon nanotubes based composites. (20)
-