

**R16**

**Code No: 138DP**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech IV Year II Semester Examinations, September - 2020**

**NANOCOMPOSITES**

**(Material Science and Nano Technology)**

**Time: 2 Hours**

**Max. Marks: 75**

**Answer any Five Questions  
All Questions Carry Equal Marks**

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- 1.a) Explain the applications of nano composites.
- b) Compare in between strength and plasticity. [8+7]
2. Analyze in detail about thermal Spray synthesis. [15]
- 3.a) Explain in detail about Metal Matrix Nanocomposites.
- b) Write about the importance of Ceramic/Metal Nano composite. [7+8]
- 4.a) Build a note on Polymer-based nano composites.
- b) Discuss in detail about solution impregnation. [7+8]
5. Develop a note on processing of polymer nano composites. [15]
6. Explain the steps involved in Modeling of nano composites. [15]
7. What is Powder metallurgy method? Explain the process of application of the same for nano composites. [15]
- 8.a) Discuss in detail about Nano composites for hard coatings.
- b) Elaborate in detail about Pressure Infiltration technique. [7+8]

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