M.SC. (Microbiology) (CBCS Pattern) Second Semester CBCS

PSMBT-108 - Nano microbiology Paper-IV

P. Pages : 1 **GUG/W/18/11219**

Time : Three Hours * 3 3 2 2 * Max. Marks : 80

Notes : 1. All the questions are compulsory and carry equal marks.

1. Describe the manipulation of matter at the molecular level to create new products with atom by atom precision. **16**

OR

Write note on followings.

a) Nanoscale lithography. **8**

b) Polymer Nano-electronics. **8**

2. Describe the followings.

a) DNA octahedron. **8**

b) Nanostructured silicon. **8**

OR

Write note on followings.

a) Viruses as Nano particles. **8**

b) Carbon Nanotubes. **8**

3. Describe the biosynthesis metalloid containing Nanoparticles by aerobic microbes. **16**

OR

Write note on followings.

a) Synthesis of Nanoparticles by fungi. **8**

b) Characteristics and applications of Quantum dots. **8**

4. Describe the production of sulfur – free Nano- particles by yeast. **16**

OR

Describe the followings.

a) Functional Nanomaterials with Anti-viral activity. **8**

b) Nano carbon ball as deodorizer in fermentation process. **8**

5. Write short note on followings.

a) E-Beam lithography. **4**

b) Cubosomes. **4**

c) Applications of Quantum dots in Immuno-Nanotechnology. **4**

d) Nano-Particle based Immobilization assay. **4**

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