(FOR THE CANDIDATES ADMITTED IN DURING THE ACADEMIC YEARS 2021 – 2022 ONLY)

(NO. OF PAGES: 1)

SUBJECT CODE 21UCY3N1

REG.NO:

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : DECEMBER - 2022

B.Sc. – CHEMISTRY **MAXIMUM MARKS: 50**

SEMESTER III **TIME : 2 HOURS**

PART - IV

NON MAJOR ELECTIVE – 1: INTRODUCTION TO NANOTECHNOLOGY

SECTION - A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS. (K1)

1. Which of the following is an example for nature nanotechnology?
   a) Lotus Leaf b) Banana Leaf c) Spinach d) CNT
2. …… is used to prepare nanostructures via top down approach.
   a) Microwave reactor b) Ball Miller c) Autoclave d) Stirrer
3. Thermal conductivity of copper nanoparticles is…
   a) greater than water b) lesser than water c) lesser than oil d) lesser than its bulk
4. ….. is used to store hydrogen gas.
   a) CNT b) Diamond c) Graphite d) Copper nanoparticle
5. ….is not an example of energy storage device
   a) Microwave reactor b) Ball Miller c) Autoclave d) Stirrer

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES. (K2)

6. Define nanotechnology.
7. What is one dimensional nanostructure?
8. Write a note on surface-volume ratio.
9. List any two applications of graphite.
10. Write any one application of nonmaterial in sensing.

SECTION – B (5 X 8 = 40 MARKS)

ANSWER ANY FIVE QUESTIONS OUT OF THE EIGHT QUESTIONS. (K3)

11. Discuss the existence of nanotechnology in nature.
12. Explain Ball milling process with neat diagram.
13. How are the nanostructures prepared using sol-gel process? Explain with neat diagram.
14. Explain any five size dependent properties of nanomaterials.
15. Summarize the properties and uses of Single Walled Carbon nanotube.
16. Review the properties and uses of Multi Walled Carbon nanotube.
17. Discuss the applications of Nanotechnology in Energy storage.
18. List the applications of Nanotechnology in Drug delivery.

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ETHICAL PAPER