

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN  
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)  
Chromepet, Chennai - 600 044.

M.Sc.Physics - END SEMESTER EXAMINATIONS - NOV'2024

SEMESTER - III

**24PPHET3B02 - Nano Technology a Makers Course**

Total Duration : 1 Hrs. 30 Mins.

Total Marks : 40

### Section B

Answer any **TEN** questions ( $10 \times 2 = 20$  Marks)

1. Define nanotechnology.
2. What are nanomaterials?
3. Write a short note on quantum dot.
4. What is sol-gel method?
5. What is lithography?
6. State the principle of SEM.
7. List out the applications of nanomaterials in electronics.
8. State the application of nanoparticles in biology.
9. What is a carbon nano tube?
10. Write a short note on bottom up approach.
11. State the applications of CNTs.
12. Mention some effects of size reduction of nano particles.

### Section C

I - Answer any **FOUR** questions ( $4 \times 5 = 20$  Marks)

13. Explain the lithography method to fabricate nanomaterials.
14. Explain in detail Chemical vapour deposition with neat diagram.
15. Differentiate between light microscope and electron microscopy with a neat diagram .
16. Explain how oxide nanoparticles can be obtained by sol gel method.
17. How are electromagnetic spectrum associated with nanotechnology.
18. Describe about cyro transmission electron microscopy.

\*\*\*\*\*