

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.

B.Sc.(Maths) - END SEMESTER EXAMINATIONS APRIL-2023

SEMESTER - II

20UMAAT2D02 - Allied Physics - II

Total Duration : 2 Hrs 30 Mins.

Total Marks : 60

Section B

Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

1. Explain on dispersive power.
2. State and explain Pauli's exclusion principle.
3. Write short notes on nuclear fission and nuclear fusion.
4. Sketch the properties of alpha, beta and gamma rays.
5. Explain the theory of Joule – Thomson effect.
6. Give the practical applications of low temperature physics.
7. Sketch the Boolean equation, truth table and symbol of an AND gate.
8. Ascertain the NOR gate is Universal gate.

Section C

Answer any **THREE** questions ($3 \times 10 = 30$ Marks)

9. Explain the determination of diameter of a thin wire using interference phenomenon.
10. Describe the vector atom model with neat diagrams.
11. Derive the expressions for half life and mean life period.
12. Discuss the liquefaction of air by Linde's method.
13. State and prove De-Morgan's theorems I and II.
