

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. END SEMESTER EXAMINATION APRIL/NOV - 2021

SEMESTER - V

17UCHCT5009 - Inorganic Chemistry - I

<b>Total Duration : 3 Hrs</b>		<b>Total Marks : 75</b>
MCQ	: 30 Mins	MCQ : 15
Descriptive	: 2 Hrs.30 Mins	Descriptive : 60

Section B

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

1. Describe  $\pi$ -meson theory of stability of nucleus.
2. Explain the working of GM counter method.
3. Write notes on soxhlet extraction.
4. Explain the factors which influences the absorption intensity maximum in UV-visible spectroscopy.
5. Write a short note on physical vapour deposition method.
6. Explain nuclear stability in terms of N/P ratio.
7. What are chromophores and auxochromes? Explain.
8. Discuss about the applications of nanomaterials.

Section C

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

9. Explain in detail liquid drop model of nucleus with its merits and demerits.
10. Illustrate the concept of nuclear fission and fusion in detail with example.
11. (a) How is the fractional distillation is used in the purification of liquid mixtures.  
(b) Write short note on solvent extraction method.
12. Discuss the instrumentation of Raman spectroscopy.
13. Explain about the synthesis of nanomaterials by different chemical methods.