No.	:	
	No.	No. :

Total No. of Questions: 11 ]

[ Total No. of Printed Pages : 3

## **BPMS-511**

# M.Sc. (Previous) Examination, 2023 CHEMISTRY

Paper - III

(CH-403)

## (Physical Chemistry)

Time: 3 Hours ] [Maximum Marks: 75

Section-A (Marks :  $2 \times 10 = 20$ )

Note: Answer all ten questions (Answer limit **50** words). Each question carries **2** marks.

Section–B (Marks:  $5 \times 5 = 25$ )

Note: Answer all five questions. Each question has internal choice (Answer limit200 words). Each question carries 5 marks.

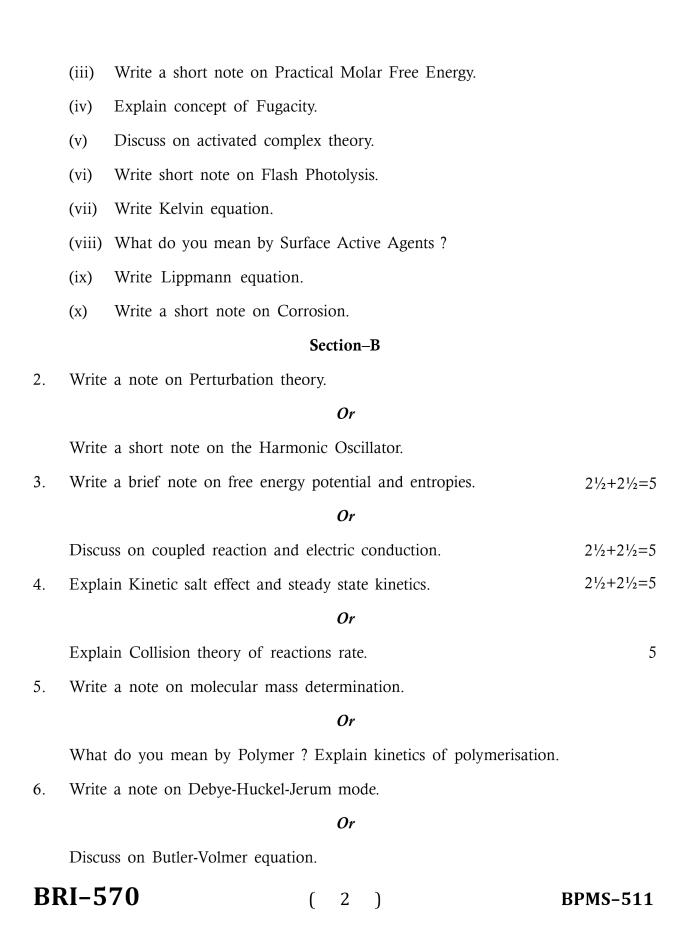
Section–C (Marks:  $10 \times 3 = 30$ )

**Note**:— Answer any *three* questions out of five (Answer limit **500** words). Each question carries **10** marks.

### Section-A

- 1. (i) Write Schrodinger wave equation.
  - (ii) Describe Pauli exclusion principle.

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### Section-C

7.	Write a note on Slater-Condon parameters and explain team separation e	energy
	of the Pn configuration.	6+4=10
0	Explain the fellowing .	

- 8. Explain the following:
  - (i) Phenomenological equation
  - (ii) Microscopic Reversibility and Onsager's reciprocity relation 3+3+4=10
- 9. Write a short note on Linde-mann-Hinshelwood theory of Unimolecular reaction.
- 10. Write notes on the following:
  - (i) BET Equation
  - (ii) Critical Micellar Concentration (CMC)

5+5=10

- 11. Explain the following:
  - (i) Hodge-Huxley equation
  - (ii) Nernst-Planck equation
  - (iii) Core conductor models

5+2+3=10