

Seat No.:-----

Enrolment No.:-----

UKA TARSADIA UNIVERSITY

Maliba Pharmacy College

B. Pharm 4th Semester Internal Examination April 2014 (*Mid-Sem*)

030020401: Physical Pharmacy – II

Time: 10:30 a.m. To 12:30 p.m.

Max. Marks: **40**

Date: 05/04/2014

Instructions:

- Attempt any **FIVE** questions.
- Each question carries **08** marks.
- Make suitable assumption whenever necessary.
- Figures to the right indicate full marks.

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| Q.1 | A) | Define Colloidal system. Give difference between Lyophilic colloidal dispersion and Lyophobic colloidal dispersion. | 04 |
| | B) | Define Gold Number. Write a note on DLVO theory. | 04 |
| Q.2 | A) | Comment on: a) Lyophobic sols exhibit greater stability than Lyophilic sols. b) Brownian movement counteracts the force of gravity. | 04 |
| | B) | Give applications of colloidal dispersions. | 04 |
| Q.3 | A) | Enlist the methods for determination of surface and interfacial tension. Explain DuNouy ring method. | 04 |
| | B) | Derive equation for W_a , W_c and S . Give applications of spreading coefficients. | 04 |
| Q.4 | A) | Define adsorption isotherm. Explain Langmuir adsorption isotherm. | 04 |
| | B) | Explain the instability issues of pharmaceutical emulsions. | 04 |
| Q.5 | A) | Explain methods to determine order of given reaction? | 04 |
| | B) | Describe the effect of temperature and solvent on rate of reaction. | 04 |
| Q.6 | A) | Explain the factors affecting rate of sedimentation of suspension. | 03 |
| | B) | The decomposition of Ramipril in aqueous acid solution was found to follow a first order reaction. The initial concentration of Ramipril was found to be 57.90 M. The concentration of Ramipril after a period of 65 hour was 9.60 M. a. Calculate reaction rate constant. b. Calculate half life and shelf life. c. Calculate the quantity of Ramipril remaining undecomposed after 80 hr. d. Calculate the quantity of Ramipril decomposed after 85 hr. | 05 |
| Q.7 | A) | Explain theory of emulsifications. | 05 |
| | B) | Differentiate between flocculated and deflocculated suspensions. | 03 |