Seat No.: ____ Enrolment No.____ **GUJARAT TECHNOLOGICAL UNIVERSITY** M. Pharm. – SEMESTER – II • EXAMINATION – WINTER • 2015 Subject Code: 2920102 Date: 07-12-2015 **Subject Name: Novel Drug Delivery System Part-1** Time: 10:30 am - 01:30 pm Total Marks: 80 **Instructions:** 1. Attempt any five questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. 0.1 (a) Describe the concept of Gastroretentive drug delivery system. Mention 06 different approaches to get Gastroretention and describe any one approach. (b) Discuss invitro dissolution study for floating drug delivery system. 05 (c) Write a short note on Enterion capsule. 05 **Q.2** (a) Discuss giving detail the design and Evaluation of dissolution controlled 06 adsorption type DEPOT parentral formulation. (b) Write a note on tamper proof packaging. 05 (c) Give the properties and evaluation of plastic materials for packaging. 05 Q.3 (a) Enumerate various approaches for colon targeting. Give details of 06 microbial flora activated system for colon targeting. (b) Give objectives of sublingual drug delivery system. Discuss Evaluation 05 Parameters for sublingual drug delivery system. (c) Write a note on Hydrogels as drug delivery system. 05 **Q.4** (a) Enumerate different techniques of osmotic drug delivery system. Discuss 06 formulation design of controlled porosity osmotic pump. Give different factors affecting drug release rate of osmotic drug delivery system. (b) Differentiate Liposomes and Nesosomes. 05 (c) Write a note on needle free injection technology. 05 **Q.5** (a) Explain various approaches of taste masking. 06 (b) Discuss advantages, Disadvantages and limitations of transmucosal 05 drug delivery system. (c) Write a note on invitro evaluation of mucoadhesion. 05 **Q.6** (a) Enumerate recent innovation of particle coating. Discuss fluid bed coating. 06 (b) Give FDA regulations for selection of packaging material. 05 (c) Write a note on SMEDDS. 05 **Q.7** (a) Discuss formulation and evaluation of periodontal drug delivery system. 06 (b) Write a note on pulsatile drug delivery system. 05 (c) Discuss mathematics for computation of dose of a drug, for bioavailability 05 improved oral conventional dosage form.