GUJARAT TECHNOLOGICAL UNIVERSITY M. Pharm - SEMESTER-I • EXAMINATION – SUMMER-2017

Subject Code: 910103 Date: 29/04/2017 Subject Name: Cellular and Molecular Pharmacology Time: 10:30 AM to 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. Q.1 Write notes on ABC superfamily of transporters. 06 (a) (b) How GRK regulates GPCR mediated actions. 05 (c) Write notes on- sodium Channel and drugs altering sodium channel 05 activity. Explain mechanisms of GABAergic transmission and various **O.2** (a) 06 modulators working on it. Classify receptors for Adenosine with emphasis on receptor type, (b) 05 mechanism, actions and agonist-antagonists How graphs can explain- potency, efficacy, antagonisms of various 05 (c) types. Q.3 Brief Note on-Role of various Extra Cellular Adhesion Molecules in (a) **06** Inflammatory reaction. How radio-ligand binding studies are carried out. 05 (b) Differentiate between Nicotinic receptors- location, type, signal (c) 05 transduction and agonist-antagonists. Explain any one of Apoptotic pathways. 06 **O.4** (a) Write note on-Endothelin with respect to location, type, signal 05 (b) transduction and agonist-antagonists. Describe few examples of receptor malfunction related diseases. (c) 05 **O.5** What role the NMDA receptor plays in CNS? How? 06 (a) Give brief note on beta adrenergic receptors- location, type, signal (b) 05 transduction and agonist-antagonists. (c) Explain the role of leucotrienes in various biological process-05 physiological and pathological, with involvement of receptors. Give signal transduction mechanism of steroids. **O.** 6 (a) 06 How apoptosis is related with aging? Explain with emphasis on CNS (b) 05 Explain various calcium channels with their locations, modulators. (c) 05 Gene therapy- advantages and problems with various vectors. **Q.7** (a) 06 Glycine- An important neurotransmitter in CNS. (b) 05

(c) How the nitric oxide plays physiological and/or pathological role? **05**