

GUJARAT TECHNOLOGICAL UNIVERSITY**M. Pharm. – SEMESTER – II • EXAMINATION – SUMMER • 2014****Subject Code: 2920103****Date: 29-05-2014****Subject Name: Pharmacometrics and Methods of Biological Evaluation of Drugs****Time: 02:30 pm - 05:30 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 (a) Define Bioassay. Briefly describe the following methods of bioassay- 06
(i) RIA of Insulin
(ii) Pigeon method for Digitalis
(iii) Rabbit method for D-tubocurarine.
- (b) Explain various models used for evaluation of Local Anaesthetic activity. 05
- (c) Write a short note on preclinical toxicity tests required to be conducted for a new drug. 05
- Q.2 (a) Describe any three methods for evaluation of activity of coronary vasodilator drugs. 06
- (b) Discuss various animal models for screening of anxiolytic agents that have effect on behaviour of animals 05
- (c) Write a short note on- Microbiological Assay of Antibiotics. 05
- Q.3 (a) Describe any two methods for inducing hypertension in rats and explain Indirect method of recording BP in rats. 06
- (b) Explain the following methods for screening sympatholytic activity of drugs 05
(i) Prolapse of Nictitating Membrane
(ii) Splenic strip of cat
- (c) Write a short note on –Experimental models of Cataract. 05
- Q.4 (a) Describe the methods used for inducing Diabetes in experimental animals. 06
- (b) Discuss the principle of evaluation of anti-inflammatory agents by 05
(i) Freund's Adjuvant Arthritis Model
(ii) Granuloma Pouch Method
- (c) Write a short note on –Pyrogen Test 05
- Q.5 (a) Explain the following animal models for evaluation of Thyroxine Analogues- 06
(i) Suppression of Iodine Uptake
(ii) Oxygen Consumption Rate
- (b) Discuss the following methods for evaluation of Testicular hormones - 05
(i) Castration of male rats
(ii) Caponization of Cockrels
- (c) Write a short note on - Screening of Diuretics 05

Q.6 (a) Explain in brief various animal models for Inflammatory Bowel Disease (IBD)	06
(b) Describe Thymus and Adrenal Involution models for evaluation of Glucocorticoid activity	05
(c) Discuss the principle and use of following equipments in evaluating activity of drugs and name the category of drug for which it is used	05
(i) Electroconvulsimeter	
(ii) Cook's Pole Climbing Apparatus	
Q.7 (a) Explain how cytoprotective activity of drugs used in Peptic Ulcer can be evaluated.	06
(b) Discuss Chemical and Thermal methods for screening of analgesic drugs.	05
(c) Write a short note on – Models for Hyperlipidaemia	05
