

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharm. – SEMESTER – II • EXAMINATION – WINTER 2013

Subject Code: 2920103

Date: 28-11-2013

Subject Name: Pharmacometrics and Methods of Biological Evaluation of Drugs

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.

- Q.1** (a) Describe a qualitative test for evaluation of mydriatic activity giving special emphasis on principles, procedure and evaluation. **06**
- (b) Enlist *in-vitro* methods of detection of diuretic activity and explain any two of them in detail. **05**
- (c) Explain briefly following terms: **05**
- a) Teratogenicity b) Mutagenicity
- c) LD 50 d) ED 50 e) Sub-Acute toxicity study
- Q.2** (a) Discuss the principle involved in evaluation of anti asthmatic agents using different models. **06**
- (b) Enlist various pyrogen tests and describe official pyrogen test in detail. **05**
- (c) Write a note on Alpha-chymotrypsin induced glaucoma model **05**
- Q.3** (a) Discuss the principle and use of the following : **06**
- i) Plus maze apparatus ii) Analgesiometer
- (b) Give various models for screening of agents as anti-Parkinson's Disease. Explain the highly acceptable model. **05**
- (c) Describe the method of evaluation of local anaesthetics through surface aesthesia. **05**
- Q.4** (a) Describe various methods for induction of dyslipidemia **06**
- (b) Write about any one model for screening of drugs useful for IBD. **05**
- (c) Write about the evaluation techniques for nootropic drugs **05**
- Q.5** (a) Enumerate different models for screening of anti-ulcer agents. Write about the pylorus ligation model in detail. **06**
- (b) Compare and contrast the maximal electro shock (MES) and chemically induced convulsion models for antiepileptic activity. **05**
- (c) Discuss chemical and electrical methods of inducing arrhythmias **05**
- Q.6** (a) Write a short note on diabetic animal models. **06**
- (b) Write about different techniques for microbiological assays of antibiotics. **05**
- (c) Discuss application of potentiation of hexobarbital sleeping time. **05**
- Q.7** (a) How will you find out possible mechanisms of action of a drug that is antihypertensive? **06**
- (b) Describe methods to differentiate ganglion blocker and adrenergic neuron blockers **05**
- (c) Define Bioassay and give its merits and demerits. Write briefly about bioassay of Digitalis. **05**
