

GUJARAT TECHNOLOGICAL UNIVERSITY**M. Pharm - SEMESTER– II. EXAMINATION – SUMMER- 2016****Subject Code: 2920103****Date: 19/05/2016****Subject Name: Pharmacometrics and Methods of Biological Evaluation of Drugs****Time: 10:30 PM to 1:30 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 and explain “standard battery of genotoxicity tests” as per ICH guidelines. **06**
- (b) Define biological standardization and discuss briefly different methods for bioassay of insulin. **05**
- (c) Write a short note on pyrogen testing. **05**
- Q.2** (a) Enumerate models for evaluation of sympathomimetics and discuss any two models in brief. **06**
- (b) Classify *in-vitro* and *in-vivo* models for evaluation of parasympatholytic drugs and discuss any one in detail. **05**
- (c) Describe any two methods for evaluation of non- depolarizing skeletal muscle relaxants. **05**
- Q.3** (a) Enumerate various models for evaluation of local anaesthetics. Explain any two models in brief. **06**
- (b) Discuss the application of potentiation of hexobarbital sleeping time. **05**
- (c) Enlist various methods for evaluation of antiepileptics. Describe any one method based on electroshock seizures. **05**
- Q.4** (a) Enumerate various *in-vitro* and *in-vivo* models for evaluation of anxiolytics. Explain in brief “Vogel’s unconditioned conflict test” and “light dark chamber model”. **06**
- (b) Enlist various methods for screening of anti-inflammatory agents. Write in brief about carrageenan-induced paw edema model. **05**
- (c) Enumerate various models for screening of antiparkinsonian drugs. Explain any one model in detail. **05**
- Q.5** (a) How primary screening of anti-atherosclerotic drugs is carried out? Write the rationale of hypercholesterolemic animals in screening. **06**
- (b) Write down any two screening methods for anti-anginal drugs. **05**
- (c) Explain lagendorff’s heart preparation and its application in cardiovascular drug evaluation. **05**
- Q.6** (a) Enumerate various methods for evaluation of drugs used in peptic ulcer. Describe pylorus ligation in brief. **06**
- (b) Write in brief *in-vivo* methods for evaluation of anti-asthmatics. **05**
- (c) Enlist various models for evaluation of drugs used in diabetes mellitus. Describe any one of them in brief. **05**
- Q.7** (a) Enlist methods for evaluation of antifertility agents for the male and female. Describe estrogenic receptor binding assay and dextran coated charcoal adsorption techniques in detail. **06**
- (b) Describe surgically induced experimental models of glaucoma. **05**
- (c) Write the rationale, experimental design and evaluation of N-methyl, N-Nitrosourea induced cataract and 2,4,6- trinitrobenzene sulphonic acid induced colitis in rats. **05**