

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
M. Pharm. – SEMESTER – II • EXAMINATION – SUMMER 2013

Subject Code: 2920103

Date: 23-05-2013

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.

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|-------------|--|-----------|
| Q.1 | (a) Explain any two models of cataract. | 06 |
| | (b) Describe any one high throughput method for screening of ligands. | 05 |
| | (c) What is importance for determining LD ₅₀ and ED ₅₀ . | 05 |
| Q.2 | (a) Describe the official test for pyrogens. | 06 |
| | (b) How to check local anesthetic activity using any <i>in vivo</i> model? | 05 |
| | (c) How one can screen the molecule for its ganglionic blocking activity? Enlist methods with brief note on their principle. | 05 |
| Q.3 | (a) Describe General Principles of Bioassay. | 06 |
| | (b) Explain Terratogenicity. | 05 |
| | (c) Give method for screening of anti-psychotic agents. How it differs from simple CNS depressants? | 05 |
| Q.4 | (a) Explain in brief the acute toxicity testing as per OECD guidelines. | 06 |
| | (b) Describe any one <i>in vivo</i> model for testing anti-inflammatory activity. | 05 |
| | (c) What are genetically modified animals? Describe briefly on their use in preclinical studies. | 05 |
| Q.5 | (a) Give the methods for antimicrobial activity screening using suitable culture media. | 06 |
| | (b) Describe any one model for type-II diabetes mellitus in rats. | 05 |
| | (c) What are important parameters for evaluating anti-ulcer agents? | 05 |
| Q. 6 | (a) Enlist various models and parameters for screening of antiparkinson activity. Describe any one model brief. | 06 |
| | (b) Which models are available for determining centrally acting antinociceptive agents? | 05 |
| | (c) How one can screen antihypertensive activity using <i>in vitro</i> methods? Describe any two methods. | 05 |
| Q.7 | (a) Explain any one model and parameters for it to screen cardiogenic activity. | 06 |
| | (b) How diuretic activity can be studied using rats? Explain model briefly. | 05 |
| | (c) Write a brief protocol for screening of neuromuscular blocking activity using any <i>in vivo</i> method. | 05 |
