

Exam Date & Time: 29-Mar-2021 (01:30 PM - 04:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

Manipal Academy of Higher Education, Manipal MPharm Theory End-Semester Examinations.

Pharmacological and Toxicological Screening Methods I [PHA-MPL103T - S3]

Marks: 75

Duration: 180 mins.

SECTION - A

Answer all the questions.

Answer the following (10 marks x 5 = 50 marks)

- 1) 1A. Construct a list of members for a committee which provides approval of study to be conducted on laboratory animals. (5 marks)
1B. Discuss the breeding method and types of breeding for laboratory animals. (5 marks) (10)
- 2) 2A. List the methods for testing NCEs for its possible pharmacological action on respiratory system. (3marks)
2B. Discuss a programmed preclinical screening to select a best anti-asthmatic molecule out of 50 molecules to get approval for human testing. (7 marks) (10)
- 3) 3A. Discuss the general principles of ELISA technique. (4 marks).
3B. Outline the procedure for assessing the levels of digoxin in biological samples by immunoassay. (6 marks) (10)
- 4) 4A. Classify animal models to screen anticonvulsant drugs based on the mode by which convulsion is induced in animals. (3 Marks)
4B. A new chemical entity (NCE) was tested in MES induced convulsions. It has reduced the E/F ratio significantly. Comment on the nature of the NCE and possible clinical application of it. (2 Marks)
4C. Elaborate on any two tests to assess the Parkinson's disease (PD)-like symptoms in mice model of PD. (5 Marks) (10)
- 5) 5A. Classify animal models to screen antihypertensive drugs. (3 Marks)
5B. Plan a programmed screening to evaluate a series of newly synthesized series of compounds against renal ligation model. (5 marks)
5C. Mention the limitations of non-invasive blood pressure recording (tail-cuff method) in rodents. (2 marks) (10)

SECTION - B

Answer all the questions.

Answer the following (5 marks x 5 = 25 marks)

- 6) 6. Compare and contrast between animal models of acute systemic anaphylaxis and Arthus type hypersensitivity reactions. (5)
- 7) 7. Compare and contrast between RIA and ELISA. (5)