

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: M. PHARM
BRANCH: PHARMACY

SEMESTER : I
SESSION : MO/19

SUBJECT: MPL103T PHARMACOLOGICAL AND TOXICOLOGICAL SCREENING METHODS I
TIME: 3:00 HOURS FULL MARKS: 75

INSTRUCTIONS:

1. The question paper contains 7 questions each of 15 marks and total 105 marks.
 2. Candidates may attempt any 5 questions maximum of 75 marks.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
-

- Q.1(a) Explain Pharmacological screening and it's types? Highlight the significance of Irwin's test in preclinical screening? [7]
- Q.1(b) Define bioassay. What is the role of bioassay in screening? Illustrate the criteria for a good biological assay. [8]
- Q.2(a) Illustrate one method for the evaluation of the following class of drugs (any three) : [9]
(i) Antiulcer drugs (ii) analgesic agents (iii)antidiarrhoeal agents (iv) antiemetic
- Q.2(b) Enumerate the methods used for the screening of anti-inflammatory activity. Illustrate the efficacy of a phlogistic agent using a suitable screening model. [6]
- Q.3(a) Enumerate the methods used for the screening of tussigens. Design one experiment to evaluate anti tussives. [7]
- Q.3(b) Define anaesthesia. Enlist the methods of local anaesthetic activity. Evaluate a new local anaesthetic using a suitable method of nerve block anaesthesia. [8]
- Q.4(a) Name four experimental diabetogens. Design two suitable experiments using both chemical and surgical procedures for the screening of antidiabetic activity. [1+3+3]
- Q.4(b) Design one experimental preclinical model each for the assessment of (a) hepatoprotective (b) muscle coordination. [4+4]
- Q.5(a) Describe different invitro and Invivo steps for approaching new drug discovery in preclinical screening. [7]
- Q.5(b) Describe different alternative methods for animal experiment in basic research. What are 3Rs in animal experiment guidelines? [8]
- Q.6(a) What is immunoassay? Write about the principle, types, categories and application of immunoassay [7]
- Q.6(b) Explain competitive and non competitive immunoassays with suitable diagrams. [8]
- Q.7(a) Describe the detailed procedure for production of polyclonal antibodies. [7]
- Q.7(b) Explain the procedure for production of monoclonal antibodies. [8]

.....29/11/2019.....E