

**M. PHARMA.**  
**THEORY EXAMINATION (SEM-II) 2016-17**  
**PHARMACOLOGICAL SCREENING METHODS**

*Time : 3 Hours**Max. Marks : 70**Note : Be precise in your answer. In case of numerical problem assume data wherever not provided.*

**SECTION- A**

- 1. Attempt all parts of this Section : 7×2=14**
- (a) What are limitations of animal experimentation?
  - (b) Suggest some alternatives for animal experimentation.
  - (c) Name the various models commonly used for detecting anti-inflammatory activity of a compound.
  - (d) How will you carry out anxiolytic potentiality of a compound?
  - (e) Write a short note on euthenesis.
  - (f) What do you mean by transgenic animals?
  - (g) Describe the various types of bioassay.

**SECTION- B**

- 2. Attempt any three parts of the following : 3×7=21**
- (a) How will you extrapolate in vitro data to preclinical studies in human volunteers?
  - (b) Discuss the various models you need to follow for noting the activity of a synthesized compound on autonomic nervous system.
  - (c) Suggest the various models one can use to detect the antiulcer activity of a drug.
  - (d) How will you evaluate the anti-diabetic effect of a herbal extract?
  - (e) Write a brief note on “new bioassay method development”.

**SECTION- C**

- 3. Attempt all questions in this section : 5×7=35**
- (a) Discuss about the maintenance and breeding of laboratory animals with special reference to CPCSEA guidelines.
  - (b) Suggest the preclinical screening of a new therapeutic agent for any of the two activities:
    - (i) CNS Stimulant activity                      (ii) Antipsychotic action
    - (iii) Nootropic action
  - (c) Discuss the models you need to follow for evaluating the anti-fertility activity of a synthesized compound.

**OR**

- How will you evaluate the molecular mechanism of the compound with reference to antibacterial, antifungal and antiviral activity of a synthetic compound emphasizing on determination of MIC of the compound?
- (d) Narrate the steps and precautions to be taken for determining the invitro and invivo anticancer action of a newly synthesized drug.
  - (e) **Write short note on (any two):**
    - (i) Statistical treatment of model problems in drug evaluation.
    - (ii) Immunoassay of insulin.
    - (iii) Evaluation of antihypertensive activity of extract.