

M. PHARM.
(SEM. II) THEORY EXAMINATION 2017-18
SCREENING METHODS & BIOASSAYS

Time: 3 Hours

Total Marks: 100

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

- 1. Attempt *all* questions in brief. **2 x 10 = 20****
- a. Write the specification of cages for housing of rats as per CPCSEA guidelines.
 - b. Enlist the members of IAEC.
 - c. Write full form and objective of FHSA.
 - d. Define Euthanasia.
 - e. Write the applications of knock-out animals.
 - f. What is safety pharmacology?
 - g. Enlist various types of bioassay?
 - h. Write a short note on MPTP model of Parkinsonism.
 - i. Enlist any three animal models used for the screening of anti-obesity agents.
 - j. List out screening methods for anti-ulcer agents.

SECTION B

- 2. Attempt any *three* of the following: **10 x 3 = 30****
- a. Write a note on ethical principles adopted by CPCSEA for use of animals in scientific experiments.
 - b. What do you mean by genetically prone animals? Discuss the role of transgenic animals in drug discovery.
 - c. Write a note on development of new bioassay methods.
 - d. Enumerate in-vivo screening methods for CNS stimulants and depressants.
 - e. Discuss the *in-vivo* and *in-vitro* screening models for anti-fertility agents.

SECTION C

- 3. Attempt any *one* part of the following: **10 x 1 = 10****
- (a) Discuss the CPCSEA guidelines to regulate the animal house.
 - (b) Describe the USFDA guidelines involving whole animal testing.
- 4. Attempt any *one* part of the following: **10 x 1 = 10****
- (a) Explain the breeding techniques of laboratory animals.
 - (b) Enumerate blood collection techniques and euthanasia in laboratory animals.
- 5. Attempt any *one* part of the following: **10 x 1 = 10****
- (a) Write a note on guidelines for the design and statistical analysis for experiments using laboratory animals.
 - (b) Discuss the principles of biological assays with examples.

6. Attempt any *one* part of the following: 10 x 1 = 10

- (a) Enumerate the *in-vivo and in-vitro* screening methods for Nootropics.
- (b) Describe methods for the *in-vivo* screening of antihypertensives.

7. Attempt any *one* part of the following: 10 x 1 = 10

- (a) Write the *in-vivo and in-vitro* screening methods for anti-cancer agents.
- (b) Enumerate methods for the *in-vivo* screening of anti-diabetic agents.