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*Total No. of printed pages = 04*

**Monsoon, 2023**

**M. Pharm (Pharmacology) Semester Examinations  
Pharmacological and Toxicological Screening Methods-I**

**Course Code: MPL103T**

**Full Marks – 75**

**Time – 3 hours**

*The figure in the margin indicates full marks for the questions.*

**1. Answer all the questions:**

**(20×1=20)**

- a) The average weight of rabbit is
  - i. 150-200 g
  - ii. 2-3 kg
  - iii. 40-60 g
  - iv. 20-30 g
- b) The instrument which is used to screen antipsychotic activity is
  - i. Cook's Pole climbing apparatus
  - ii. Analgesiometer
  - iii. Actophotometer
  - iv. None of the above
- c) The apparatus which is used to screen Diuretic property is
  - i. Plethysmometer
  - ii. Analgesiometer
  - iii. Metabolic cage
  - iv. None of the above
- d) Pylorus ligation is a method of
  - i. Antidiabetic drug screening
  - ii. Anticancer drug screening
  - iii. Antihistaminic drug screening
  - iv. Antiulcer drug screening
- e) The chemical which is used to induce pain in animal is
  - i. Streptozotocin
  - ii. Carageenan
  - iii. Acetic acid
  - iv. None of the above
- f) Writhing response in mice means
  - i. Constriction of abdomen
  - ii. Twisting of Trunk

- iii. Extension of hind limbs
- iv. All of the above
- g) The following drugs increase the pupillary size except
  - i. Ephedrine
  - ii. Atropine
  - iii. Cocaine
  - iv. Pilocarpine
- h) Glucometer is used to check
  - i. Blood sugar
  - ii. Body temperature
  - iii. Oxygen
  - iv. None of the above
- i) The following is an example of coagulant
  - i. Fibrinogen
  - ii. Vitamin K
  - iii. Heparin
  - iv. None of the above
- j) The following is a local anesthetic
  - i. Lignocaine
  - ii. Albendazole
  - iii. Warfarin
  - iv. None of the above
- k) The method of sacrificing animal is known as
  - i. Euthanasia
  - ii. Anesthesia
  - iii. Analgesia
  - iv. None of the above
- l) When local anesthetic is applied in rabbit eye
  - i. Corneal reflex is absent
  - ii. Corneal reflex is present
  - iii. Corneal and light reflex is present
  - iv. None of the above
- m) The instrument which is used to screen antiasthmatic property is
  - i. Histamine Chamber
  - ii. Rota rod apparatus
  - iii. Acto photometer
  - iv. None of the above
- n) Myosis in eye means
  - i. Pupil size is increased
  - ii. Pupil size is decreased
  - iii. Normal pupil size
  - iv. None of the above
- o) Cat spleen method is for screening of

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- i. Sympatholytic drug
  - ii. Sympathomimetic drug
  - iii. Muscle relaxant
  - iv. None of the above
- p) Chronic toxicity study is done for
- i. 14 days
  - ii. 28 days
  - iii. 10 days or above
  - iv. None of the above
- q) The screening of drugs in animals is known as
- i. Preclinical Screening
  - ii. Clinical Screening
  - iii. Animal studies
  - iv. None of the above
- r) The role of CCSEA is
- i. To monitor animal experiments
  - ii. To monitor Institute
  - iii. To monitor Instruments
  - iv. None of the above
- s) In antiepileptic screening the instrument which is used to induce pain in animal is
- i. Electroconvulsometer
  - ii. Electrode
  - iii. Analgesiometer( Hot plate method)
  - iv. None of the above
- t) The instrument by which CNS depressant activity is screened is
- i. Metabolic cage
  - ii. Actophotometer
  - iii. Microtome
  - iv. None of the above

### 2. Answer any seven questions: ( Word limit for each question is 500 words)

(7×5=35)

- a) Write a brief note on Transgenic animals.
- b) Write a brief note on laboratory animals.
- c) Write a brief note on different route of drug administration in laboratory animals.
- d) Write a brief note on preclinical screening models of CNS stimulant activity.
- e) What are antiepileptics? Write a brief note on preclinical screening models of antiepileptic drugs.
- f) Explain any one model for screening anti-inflammatory agents.

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- g) Write a brief note on applications of different species and strains of animals.
- h) Write a brief note on maintenance and breeding of laboratory animals.
- i) Explain any one model for screening immunomodulators agents.

**3. Answer any two questions: (Word limit for each question is 500 words) (2×10=20)**

- a) List out the commonly used methods to screen any new substances for antidiabetic activity. Discuss one *in-vivo* and *in-vitro* method.
- b) Enumerate the various pre-clinical models for screening analgesic agents.

**c) Short notes: (2×5=10)**

- i. Write briefly on research hypothesis.(5)
- ii. Screening of antidyslipidemic agents.(5)