

Birla Institute of Technology and Sciences, Pilani, Pilani-Campus, Rajasthan
Mid-term examination (CLOSED BOOK)
I Semester 2022-2023

Course Name: Screening Methods and Techniques in Pharmacology Course Code: PHA G619
Date: 3/11/2022 Duration: 55 min Max. Marks: 20

Instructions

- 1. All questions are compulsory.**
 - 2. Please write the correct question number in the answer sheets.**
 - 3. Draw Diagrams wherever necessary.**
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- 1. Explain in detail a model where rats or mice are exposed chronically to a constant bombardment of unpredictable micro-stressors. How can we evaluate the anti-depressant potential of an NCE in this model? [5]**

- 2. Ginseng is commonly used in nutraceuticals as an anti-oxidant and hepatoprotective agent. The tablet dosage form of its active constituent, i.e., ginsenosides, is available to you, in which ginsenosides is 250 mg. In an experimental study, you are using this agent as a standard control at a dose of 45 mg/kg. You have three rats, each weighing 120 g, 150 g, and 180 g, respectively. Give the detailed calculation of the dosage for each animal for oral administration and preparation of stock solution from the given tablet. [8]**

- 3. What is 6-OHD? How is it used to differentiate between drugs which pre-synaptically activate dopamine release and Dopaminergic agonists? Explain giving mechanism of these classes of drugs. [4]**

- 4. What is the mechanism for tetrabenazine-induced depression in rats? [3]**

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Mid-term examination (OPEN BOOK)
I Semester 2022-2023

Course Name: Screening Methods and Techniques in Pharmacology Course Code: PHA G619
Date: 3/11/2022 Duration: 35 min Max. Marks: 10

Instructions

1. All questions are compulsory.
 2. Please write correct question number in answer sheets.
 3. Draw Diagrams wherever necessary.
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1. Transgenic mice offer several advantages over traditional animal models where disease or condition has been induced chemically and physically. How was PDAPP and Tg2576 mice created? What is the basis of creating them? [3]

2. What do you understand by the following coordinates: AP: -5.0, ML: +1.5, DV: -8.0? How are they useful? [2]

3. Explain briefly: [1+1+1+2]

- (i) Difference between working and reference memory.
- (ii) Individuals with Down syndrome are more prone to Alzheimer's disease
- (iii) Na(V) 1.7 can be a target for analgesics
- (iv) Vincristine causes neuropathic pain