

SET A

Full Marks : 75

Marks : 20

Choose the correct answer from the following:

PART-A: Objective

- 1

9. Which of the following types of studies is typically conducted during the preclinical phase to evaluate the absorption, distribution, metabolism, and excretion (ADME) of a new substance?
 - a. In vitro studies
 - b. In vivo studies
 - c. Clinical trials
 - d. Pharmacokinetic study
10. What is the purpose of conducting "structure-activity relationship" (SAR) studies during preclinical screening?
 - a. To evaluate the efficacy of a substance
 - b. To identify potential side effects
 - c. To determine the optimal dosage
 - d. To understand how modifications to the chemical structure affect pharmacological activity
11. What is the primary purpose of conducting a "histamine-induced bronchospasm" study in preclinical screening?
 - a. To evaluate the anti-inflammatory activity of a substance
 - b. To assess the respiratory toxicity of a substance
 - c. To determine the anti-allergic activity of a substance
 - d. To evaluate the bronchodilatory activity of a substance
12. Which of the following tests is commonly used to evaluate the anti-inflammatory activity of a new substance in preclinical screening?
 - a. Carrageenan-induced paw edema test
 - b. Histamine-induced bronchospasm test
 - c. Ovalbumin-induced asthma test
 - d. Passive cutaneous anaphylaxis test
13. What is the purpose of conducting an "ovalbumin-induced asthma" study in preclinical screening?
 - a. To evaluate the anti-inflammatory activity of a substance
 - b. To assess the respiratory toxicity of a substance
 - c. To determine the anti-allergic activity of a substance
 - d. To evaluate the bronchodilatory activity of a substance
14. Which of the following tests is commonly used to evaluate the respiratory toxicity of a new substance in preclinical screening?
 - a. Acute inhalation toxicity test
 - b. Subchronic inhalation toxicity test
 - c. Chronic inhalation toxicity test
 - d. All of the above
15. What is the primary purpose of conducting a "passive cutaneous anaphylaxis" (PCA) test in preclinical screening?
 - a. To evaluate the anti-inflammatory activity of a substance
 - b. To assess the respiratory toxicity of a substance
 - c. To determine the anti-allergic activity of a substance
 - d. To evaluate the immunogenicity of a substance

16. What is the primary purpose of conducting a "Langendorff heart perfusion" study in preclinical screening?
 - a. To evaluate the vasodilatory activity of a substance
 - b. To assess the cardiac contractility of a substance
 - c. To determine the anti-arrhythmic activity of a substance
 - d. To evaluate the coronary blood flow of a substance
17. Which of the following tests is commonly used to evaluate the antihypertensive activity of a new substance in preclinical screening?
 - a. Deoxycorticosterone acetate (DOCA)- salt hypertension test
 - b. Spontaneously hypertensive rat (SHR) test
 - c. Renovascular hypertension test
 - d. All of the above
18. What is the purpose of conducting a "thrombosis model" study in preclinical screening?
 - a. To evaluate the anti-coagulant activity of a substance
 - b. To assess the anti-platelet activity of a substance
 - c. To determine the fibrinolytic activity of a substance
 - d. All of the above
19. Which of the following tests is commonly used to evaluate the cardiotoxicity of a new substance in preclinical screening?
 - a. Electrocardiogram (ECG) test
 - b. Cardiac catheterization test
 - c. Echocardiography test
 - d. All of the above
20. What is the primary purpose of conducting a "vascular reactivity" study in preclinical screening?
 - a. To evaluate the vasodilatory activity of a substance
 - b. To assess the vasoconstrictive activity of a substance
 - c. To determine the endothelial function of a substance
 - d. All of the above

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(PART-B: Descriptive)

Time : 2 hrs. 30 min.

Marks : 35

[Answer any seven (7) questions]

1. Explain the production and application of transgenic animals. 5
2. Describe the methods used for screening anti-Parkinson drugs. 5

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| 3. | Describe the CPCSEA guideline to conduct experiments on animals. | 5 |
| 4. | Discuss different methods used for the screening of sympathomimetic drugs. | 5 |
| 5. | Name any five in-vivo models used for the screening of hepatoprotective agents. Explain any one in detail. | 5 |
| 6. | Explain in brief about effects of Anesthesia on experimental animals. | 5 |
| 7. | Write down different in-vivo preclinical screening models for antifertility agents. | 5 |
| 8. | Write down in short about Hepatoprotective screening methods. | 5 |
| 9. | Discuss in detail about various routes of drug administration in experimental animals. | 5 |

PART-C : Long type questions

[Answer any two (2) questions]

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| 1. | What do you understand about maintenance and breeding of laboratory animals as well as also discuss about significance of Anesthesia on experimental animals? | 10 |
| 2. | Explain any two in-vitro methods for the preclinical screening of anti-epileptics. | 10 |
| 3. | What is a homogenous and heterogeneous immunoassay system? Discuss various methods and optimization of immunoassay. | 10 |

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