



End Term (Even) Semester Examination, May–June 2025

Roll no.....

Name of the Course and Semester: B.Pharm and VIII

Name of the Subject: Experimental Pharmacology

Subject Code: BP-810ET

Time: 3 hour

Maximum Marks: 75

Note:

- (i) This question paper contains three sections.
- (ii) All sections are compulsory.

SECTION-A

Multiple choice questions:

20 X 1 = 20 Marks

1	CPCSEA stands for: a) Central Protocol for Chemical Safety and Ethics b) Committee for the Purpose of Control and Supervision of Experiments on Animals c) Committee for Chemical Safety and Animal Experiments d) Centre for Protection and Care of Scientific Experimental Animals	(CO1)
2	The principle of 3Rs in animal research includes all except: a) Replace b) Remove c) Reduce d) Refine	(CO1)
3	The OECD guidelines are mainly used for: a) Animal breeding b) Animal shelter construction c) Chemical safety testing d) Blood collection techniques	(CO1)
4	The marginal ear vein is used to collect blood from which animal? a) Rat b) Rabbit c) Guinea pig d) Mouse	(CO1)
5	Why are positive control groups important in animal studies? a) To save cost b) To compare the new drug's effect c) To increase the number of animals d) To avoid using sham control	(CO2)



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6	In preclinical studies, why is the sex of the animal important? a) For faster results b) To reduce animal weight c) Due to hormonal and metabolic differences d) To control cost	(CO2)
7	Which of the following is used to test sedative-hypnotic activity? a) Pentobarbital-induced sleep b) Tail flick test c) Catalepsy test d) Wire hang test	(CO2)
8	In anti-inflammatory screening, which model is used for acute inflammation? a) Cotton pellet granuloma b) Yeast-induced fever c) Carrageenan-induced paw edema d) Formalin test	(CO2)
9	Which of the following drugs mimics sympathetic nervous system activity? a) Atropine b) Adrenaline c) Acetylcholine d) Neostigmine	(CO3)
10	Pilocarpine is an example of: a) Sympatholytic b) Parasympathomimetic c) Skeletal muscle relaxant d) Local anesthetic	(CO3)
11	Which model is used to assess the effect of drugs on intraocular pressure? a) Glaucoma model b) Forced swim test c) Grip strength test d) Elevated plus maze	(CO3)
12	Why is the frog rectus abdominis muscle used in preclinical studies? a) For cardiac testing b) For eye testing c) For skeletal muscle contraction d) For anesthesia	(CO3)
13	Which biochemical test indicates antidiabetic activity? a) Blood glucose test b) White blood cell count c) Serum creatinine d) Platelet count	(CO4)



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14	Tail-cuff method in rats is commonly used to screen: a) Diuretics b) Antidiabetic drugs c) Antihypertensives d) Anticancer agents	(CO4)
15	Furosemide is used in animal studies to evaluate: a) Sedation b) Diuresis c) Hypertension d) Epilepsy	(CO4)
16	Aggregometry measures the activity of: a) White blood cells b) Platelets c) Muscle relaxants d) Neurons	(CO4)
17	Which type of graph is suitable for comparing means with standard deviation? a) Pie chart b) Histogram c) Line graph d) Bar graph with error bars	(CO5)
18	One-way ANOVA is used when: a) Comparing the mean of one group only b) Two groups are compared c) More than two groups are compared d) No groups are compared	(CO5)
19	A good hypothesis should be: a) Vague and lengthy b) Based on assumptions only c) Testable and measurable d) Dependent on references	(CO5)
20	In a Student's t-test, a significant result ($p < 0.05$) indicates: a) There is no significant difference between the groups. b) The means of the two groups are significantly different. c) The sample size is too small. d) The hypothesis is not valid.	(CO5)



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SECTION-B

Short Questions: Attempt any SEVEN questions.

$7 \times 5 = 35$ Marks

1	Explain different techniques used for blood collection in laboratory animals	(CO1)
2	Describe three common routes of drug administration in laboratory animals.	(CO1)
3	Explain how diuretic activity is evaluated using animal models.	(CO2)
4	Describe any one preclinical models used for screening anti-Parkinson's drugs.	(CO2)
5	Discuss the use of the Rotarod test for screening skeletal muscle relaxants.	(CO3)
6	Explain the pharmacological screening of drugs acting on the eye using animal models.	(CO3)
7	Describe the pylorus ligation model used in the screening of antiulcer drugs.	(CO4)
8	Describe the Histamine Chamber model used in screening of anti-asthmatic drugs.	(CO4)
9	Discuss the key factors to consider while selecting a research topic in scientific research.	(CO5)

SECTION-C

Long questions: Attempt any TWO questions

$2 \times 10 = 20$ Marks

1	Discuss the CPCSEA guidelines for animal experimentation in detail.	(CO1)
2	Write in detail on animal models used to evaluate antipyretic and analgesic activity.	(CO2)
3	Explain various steps involved in the research process?	(CO5)