28/6/22 M

Roll Number ----------------------- (Total Number of Questions 13)   (Total number of Printed Pages 01)

Programme	B. Pharmacy
Semester	8th
Subject	Experimental Pharmacology
Subject Code	BP810ET
Paper ID	79773
Time	3Hours
Maximum Marks	75

Instructions to Candidates: No supplementary/continuation sheet will be issued to the candidates. Answer the questions precisely.
*Section A consists of Ten parts of 2 marks each (Objective Type); Attempt ALL.
**Section B consists of Three questions carrying 10 marks each (Long Answer); attempt any TWO.
*** Section C consists of Nine questions carrying 5 marks each (Short Answer); attempt any SEVEN.

Section A   (10 X2 = 20)

1. Give very short answers to the followings (2 marks each):

i.	Expand the term CPCSEA & OECD.
ii.	Why rats cannot be used for evaluating anti-emetics.
iii.	Enumerate the different stages of anaesthesia.
iv.	Differentiate between *in vivo* and *in vitro* methods.
v.	Enlist various method of Euthanasia as per CPCSEA guideline.
vi.	Define Acute and chronic toxicity.
vii.	Enlist various models used for genetically obese animals.
viii.	Enlist the various technique used for blood collection.
ix.	Enlist the models used for preclinical evaluation of antiepileptic drugs.
x.	Write the name of chemicals used to induce ulcers along with dose of each.

Section B   (2 X 10 = 20)

2.	Explain the pharmacological techniques to evaluate antiparkinsonism drugs.
3.	Discuss the experimental model for evaluating antihypertensive drugs.
4.	Briefly explain the experimental model for screening of analgesic, antipyretic and anti-inflammatory activities.

Section C   (7 X 5 = 35)

5.	Difference between streptozotocin induced diabetes model with alloxan induced diabetes model.
6.	Explain the pharmacological techniques to evaluate anticancer drugs.
7.	Write short notes on Students 't' test.
8.	Write short notes on Null hypothesis.
9.	What are common laboratory animals used for experimentation.
10.	Explain the role of transgenic animals in evaluation of drugs.
11.	Give detail about the ANOVA test.
12.	Give detail about how to select research topic & method of review of literature.
13.	Write short notes on model for pre clinical evaluation for local anaesthetic.

*****

Note: Disclosure of identity by writing mobile number or making request for passing on any page of answer-sheet will lead to UMC against the candidate.

Roll Number ------------------------ (Total Number of Questions 13)   (Total number of Printed Pages 01)

Programme	B. Pharmacy
Semester	8th
Subject	Experimental Pharmacology
Subject Code	BP810ET
Paper ID	79773
Time	3Hours
Maximum Marks	75

Instructions to Candidates: *No supplementary/continuation sheet will be issued to the candidates. Answer the questions precisely.*
*Section A consists of Ten parts of 2 marks each (Objective Type); Attempt **ALL**.
Section B consists of Three questions carrying 10 marks each (Long Answer); attempt any **TWO.
*** Section C consists of Nine questions carrying 5 marks each (Short Answer); attempt any **SEVEN**.

Section- A
(10 X2 = 20)

1.	Give very short answers to the followings:
i.	What are the compositions of IAEC?
ii.	Define ulcer index.
iii.	Write the name of two CCSEA approved euthanasia drug in rodents?
iv.	Name any two methods for animal handling.
v.	Write applications of knockout mice in preclinical research?
vi.	What is significance of sham negative and positive control groups?
vii.	Name two screening models for evaluating nootropics.
viii.	Name two screening models for evaluating alzheimer's disease.
ix.	Name two screening models for evaluating antidyslepidemic.
x.	What do you mean by research hypothesis?

Section- B
(2 X 10 = 20)

2.	Make a comprehensive note on CPCSEA guidelines for experimental animals.
3.	Give an outline of the pathophysiology of depression. Mention any two animal models used for screening antidepressant drugs.
4.	Discuss preclinical screening models for the evaluation of antiulcer drugs.

Section- C
(7 X 5 = 35)

5.	Define euthanasia. What is the objectives euthanasia?
6.	What are the need and applications of transgenic animal in drug discovery?
7.	Discuss about various routes of drug administration in laboratory animals.
8.	Write short note on lipschitz test?
9.	Write significance and methodology of hole board test?
10.	Discuss tail suspension test in mice.
11.	Discuss two methods used for the evaluation of acute and sub-acute inflammation in animal.
12.	Write short note on hot plate method in screening of analgesic activity.
13.	Write about DOCA salt-induced hypertension model in rat?

*****

Note: Disclosure of identity by writing mobile number or making request for passing on any page of answer-sheet will lead to UMC against the candidate.

120624 (E)

Instructions to Candidates: *No supplementary/continuation sheet will be issued to the candidates. Answer the questions precisely.*
*Section A consists of Ten parts of 2 marks each (Objective Type); Attempt **ALL**.
Section B consists of Three questions carrying 10 marks each (Long Answer); attempt any **TWO.
*** Section C consists of Nine questions carrying 5 marks each (Short Answer); attempt any **SEVEN**.

Section- A (10 X 2 = 20)

1.	Give a very short answers to the followings:
i.	What is an inbred strain?
ii.	What is the ulcer index? How is it calculated?
iii.	List various blood collection techniques.
iv.	What is the expanded form of CCSEA?
v.	Write a note on the Morris Water Maze test.
vi.	Write the advantages of nude mice in experimental pharmacology.
vii.	What is the Lipschitz test?
viii.	What is catatonia?
ix.	Explain briefly the in vitro method to screen antiasthmatics.
x.	What is the difference between a negative and positive control group?

Section- B (2 X 10 = 20)

2.	Enumerate the various methods to evaluate the analgesic activity of a drug.
3.	Define hypertension. List the methods available to induce hypertension and describe three methods used in the screening of antihypertensive agents.
4.	Write a note on commonly used experimental animals. Briefly explain the housing methods and euthanasia procedures.

Section- C (7 X 5 = 35)

5.	What are the applications of different species and strains of animals in experimental pharmacology?
6.	Explain the importance of one-way ANOVA.
7.	Discuss the streptozotocin-induced diabetes experimental animal model.
8.	List the screening models for Parkinsonism. Explain the MPTP model in detail.
9.	Explain briefly about the maintenance and breeding of laboratory animals.
10.	Explain the screening model of anti-cancer drugs.
11.	Write an account note on sources for literature survey.
12.	Why is animal testing important in preclinical trials?
13.	What are the different types of mazes used in animal research?

*****

Note: Disclosure of identity by writing mobile number or making request for passing on any page of answer-sheet will lead to UMC against the candidate.

Roll Number ------------------------- (Total Number of Questions 13)   (Total number of Printed Pages 01)

Programme	B. Pharmacy
Semester	8th
Subject	Experimental Pharmacology
Subject Code	BP810ET
Paper ID	79773
Time	3 Hours
Maximum Marks	75

Instructions to Candidates: *No supplementary/continuation sheet will be issued to the candidates. Answer the questions precisely.*
Section A consists of Ten parts of 2 marks each (Objective Type); Attempt ALL.
**Section B consists of Three questions carrying 10 marks each (Long Answer); attempt any TWO.*
*** Section C consists of Nine questions carrying 5 marks each (Short Answer); attempt any SEVEN.*

Section- A   (10 X2 = 20)

1.	Give very short answers to the followings:
i.	Write commonly used laboratory animals for experiments.
ii.	Why rats cannot be used for evaluating anti-emetics.
iii.	Enumerate the different stages of anaesthesia.
iv.	Differentiate between *in vivo* and *in vitro* methods.
v.	Write the name of chemicals used to induce ulcer.
vi.	Enlist the various models for screening the anti-inflammatory drugs.
vii.	What do you mean by transgenic animals?
viii.	Write the various technique used for blood collection.
ix.	Enlist the models used for preclinical evaluation of diabetes drugs.
x.	Define the graded doses response.

Section- B   (2 X 10 = 20)

2.	Explain the pharmacological techniques to evaluate anticonvulsant drugs.
3.	Discuss the experimental models for evaluating diuretics.
4.	Briefly explain the OECD guideline for acute toxicity studies.

Section- C   (7 X 5 = 35)

5.	Writes short notes on Paired 't' test.
6.	Explain the pharmacological techniques to evaluate antihypertensive drugs.
7.	Write notes on streptozotocin induced model is superior as compared to alloxan induced model for screening the diabetes.
8.	Write short notes on alternatives the animal experiments.
9.	Write the composition of IAEC. Give detail about the functions of IAEC.
10.	Role of transgenic animals in evaluation of drugs.
11.	Give detail about the ANOVA test.
12.	Write about Null and Alternative hypothesis.
13.	Write short notes on model for pre clinical evaluation for analgesic activity.

*****

Note: Disclosure of identity by writing mobile number or making request for passing on any page of answer-sheet will lead to UMC against the candidate.

Programme	B. Pharmacy
Semester	8th
Subject	Experimental Pharmacology
Subject Code	BP-810ET
Paper ID	79773
Time	3 Hours
Maximum Marks	75

Instructions to Candidates: *No supplementary/continuation sheet will be issued to the candidates. Answer the questions precisely.*
Section- A** consists of **ten questions**, each carrying **2 marks** (Very Short Answer Type); **Attempt all.
****Section- B** consists of **three questions**, each carrying **10 marks** (Long Answer Type); **Attempt any two.***
*****Section- C** consists of **nine questions, each carrying** 5 marks **(Short Answer Type);** *Attempt any seven.*

Section- A   (10X2=20)

1.	Give very short answers to the followings:
i.	Outline the *in- vivo* and *in- vitro* methods used in preclinical screening.
ii.	Define research design.
iii.	Mention any two CCSEA-approved methods of euthanasia in rodents.
iv.	What is a positive control group? Provide an example.
v.	Summarize one rodent model used for testing anti-dyslipidaemic activity.
vi.	State the basic principle of the writhing test.
vii.	List any two tests commonly used for hypothesis testing.
viii.	State any two models used to evaluate antipyretic activity.
ix.	Identify any two techniques for blood collection in animals.
x.	Highlight the advantages of using one-way ANOVA.

Section- B   (2X10=20)

2.	Outline the animal models used to screen diuretic activity.
3.	Summarize the methods for production, maintenance, and applications of transgenic animals.
4.	Mention any two methods used to evaluate the anti-ulcer activity of test compounds.

Section- C   (7X5=35)

5.	Write any two *in-vitro* screening methods used to evaluate anticancer agents.
6.	Define null and alternate hypotheses and illustrate their application with relevant examples.
7.	Enumerate two validated screening methods for assessing antihypertensive drug activity.
8.	Describe standard preclinical models used for evaluating anti-diabetic drugs.
9.	Provide an overview of experimental models for nootropics screening.
10.	Write the procedure used for testing local anaesthetic activity in the rabbit model.
11.	Mention the use and interpretation of Student's *t*-test and one-way ANOVA in animal research.
12.	Outline steps to evaluate skeletal muscle relaxant activity using any two models.
13.	Summarize common techniques employed for anesthesia and euthanasia in laboratory animals.

*****

Note: Disclosure of identity by writing mobile number or making request for passing on any page of answer-sheet will lead to UMC against the candidate.