FINAL EXAM
DECEMBER 2020

NATIONAL BOARD OF EXAMINATIONS

PHARMACOLOGY

PAPER-III

Time: 3 hours
Max. Marks:100

PHARM/D/20/34/III

Important Instructions:

- ***You are provided with 5 answer sheet booklets. Each individual answer sheet booklet consists of 10 pages excluding the covering jackets.***
- ***Answers to all the questions must be attempted within these 5 answer sheet booklets which must be later tagged together at the end of the exam.***
- ***No additional supplementary answer sheet booklet will be provided.***
- *Attempt all questions in order.*
- *Each question carries 10 marks.*
- *Read the question carefully and answer to the point neatly and legibly.*
- *Do not leave any blank pages between two answers.*
- *Indicate the question number correctly for the answer in the margin space.*
- *Answer all the parts of a single question together.*
- *Start the answer to a question on a fresh page or leave adequate space between two answers.*
- *Draw table/diagrams/flowcharts wherever appropriate.*

Write short notes on:

1.	a) pA_2. b) Nocebo response.	5+5
2.	Briefly discuss analysis of variance (ANOVA) with an example. List three post hoc tests commonly used after results are significant for ANOVA.	7+3
3.	Describe various preclinical screening methods for evaluation of a new antihypertensive drug.	10
4.	Elucidate the three Rs for animal experiments. Explain in brief any four alternatives to animal experiments.	6+4
5.	Define meta-analysis. Explain in brief the steps involved in carrying out a meta-analysis.	2+8
6.	How should preclinical evaluation of antidiabetic drugs be carried out?	10
7.	What is null and alternate hypothesis in superiority and non-inferiority clinical trials? Explain type I and type II errors with examples.	5+5
8.	Purpose and principles of “Good Clinical Practices”.	10
9.	Enumerate pre-clinical systemic toxicity studies for evaluation of a drug candidate. Briefly write the procedure to carry out acute toxicity studies.	3+7
10.	Principle of high-performance liquid chromatography (HPLC) and its application in research.	7+3

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