



भारतीय भेषजी परिषद्
(भेषजी अधिनियम, 1948 से जलगत स्थापित)
PHARMACY COUNCIL OF INDIA
(CONSTITUTED UNDER THE PHARMACY ACT, 1948)

तार	Telegram : 'फार्मकौंसिल' 'FARMCOUNCIL'	संयुक्त परिषद् भवन	Combined Councils' Building
दूरभाष	Telephone : 23239184, 23231348	कोटला रोड	Kotla Road
फैक्स	Fax : 011-23239184	ऐवान-ए-ग़ालिब मार्ग	Aiwan-e-Ghalib Marg
ई-मेल	E-Mail : pci@ndb.vsnl.net.in	पोस्ट बॉक्स नं. 7020	Post Box No. 7020
वेबसाइट	Website : www.pci.nic.in	नई दिल्ली - 110002	New Delhi - 110002

Ref. No. 14-143/2009-PCI

70773-73292

15 MAR 2017

All Institutions approved by PCI -

- u/s 12 of the Pharmacy Act, 1948
- for conduct of course.

Sub: Regarding Journals in Pharmacy Colleges.

Sir

This has a reference to the subject cited above.

In this connection, it is requested to subscribe -

- the national journals as per the enclosed list as **Appendix-1.**
- besides above national journals, institution shall also subscribe -

- For Pharm D course
two international journals in pharmacy practice containing data regarding drug information.
- For M.Pharm course(s)
at least two international journals for each specialization.

Yours Faithfully

(ARCHANA MUDGAL)
Registrar-cum-secretary

Appendix - I

Sl. No.	Name of Journals	Address of Publications	DD. Favoring Name
1.	Indian Journal of Pharmaceutical Sciences(B-M)	The Editor, Indian Journal of Pharmaceutical Sciences, Kalina, Santacruz (E), Mumbai – 400098.	Indian Journal of Pharmaceutical sciences -Mumbai
2.	Indian Drugs (M)	The Editor, Indian Drugs, Indian Drug Manufacturer's Association, 102-B, Poonam Chambers, 'A' Wing, Dr.A.B. Road, Worli, Mumbai – 400 018.	Indian Drug manufacturer's Association – Mumbai
3.	Pharma Times (M)	The Editor, Pharma Times, Indian Pharmaceutical Association, Kalina, Santacruz (E), Mumbai – 400098.	Pharma Times-Mumbai
4.	The Pharma Review (B-M)	M/S.Kongposh Publications Pvt. Ltd., C-19,Safdarjung development area, Commercial center, Opp.II Gate, New Delhi – 110016.	Kongposh Publications Pvt., Ltd – New Delhi
5.	Indian journal of Chemistry section – A (M)	The Sr. Sales & Distribution Officer, NISCAIR,Dr. K.S. Krishnan Marg, Near Pusagate, New Delhi – 110 012.	NISCAIR-New Delhi
6.	Indian journal of Chemistry section – (B -M)	The Sr. Sales & Distribution Officer, NISCAIR,Dr. K.S. Krishnan Marg, Near Pusagate, New Delhi – 110 012.	NISCAIR-New Delhi
7.	Indian journal of Heterocyclic chemistry (Q)	The Editorial Office, Connect Journal, D-189, Ramprastha colony, Post office; Chander nagar, Ghaziabad - 201 011.	Connect Journal, Ghaziabad
8.	Indian Journal of Pharmacology (B-M)	The Senior Associates-Subscriptions, Health Learning, Research & Practice, Medknow Publications & Media (p). Ltd., B5-12, Kanara Business Center, Ghatkopar-East, Mumbai - 400 075.	Wolters Kluwer India (P) Ltd.- Mumbai

Sl. No.	Name of Journals	Address of Publications	DD. Favoring Name
9.	Indian journal of Experimental Biology (M)	The Sr. Sales & Distribution Officer, NISCAIR, Dr. K.S. Krishnan Marg, Near Pusa Gate, New Delhi - 110 012.	NISCAIR-New Delhi
10.	Indian Journal of Pharmacy Practice (Q)	Prof. B.G. Shivananda, Secretary, APTI, No 620 D, 35 th Cross, 2 nd Block, Rajaji Nagar, Bangalore - 560 010.	The Secretary, APTI-Bangalore
11.	Journal of Hospital Pharmacy	The Editor, Journal of Hospital Pharmacy, Health Education Bureau, 55/20, Rajatpath, Manasarovar, Jaipur - 302 020.	Health Education Bureau -Jaipur
12.	Medicinal & Aromatic plants Abstracts (B-M)	The Sr. Sales & Distribution Officer, NISCAIR, Dr. K.S. Krishnan Marg, Near Pusagate, New Delhi - 110 012.	NISCAIR-New Delhi
13.	Indian Journal of Natural product and Resources (B-M)	The Sr. Sales & Distribution Officer, NISCAIR, Dr. K.S. Krishnan Marg, Near Pusagate, New Delhi - 110 012.	NISCAIR-New Delhi
14.	Indian Journal of Traditional knowledge (Q)	The Sr. Sales & Distribution Officer, NISCAIR, Dr. K.S. Krishnan Marg, Near Pusa Gate, New Delhi - 110 012.	NISCAIR-New Delhi
15.	Indian Journal of Pharmaceutical Education and Research (Q)	The Editorial Office, IJPER (Indian Journal of Pharmaceutical Education and Research), No. 620D, 35 th cross, 2 nd block, Between ESI Hospital and RTO Office, Rajajinagar, Bangalore - 560 010.	Indian Journal of Pharmaceutical Education and Research -Bangalore
16.	Indian Journal of Medical Research- (m)	Indian Council of Medical Research P.O. Box No.4911 Ansari Nagar, New Delhi - 110029	Director-General, Indian Council of Medical Research" payable at New Delhi.



PHARMACY COUNCIL OF INDIA

(Constituted under the Pharmacy Act, 1948)

E-MAIL : registrar@pci.nic.in
WEBSITE : www.pci.nic.in
Telephone : 011-61299901
011-61299902
011-61299903

NBCC Centre, 3rd Floor,
Plot No.2, Community Centre
Maa Anandamai Marg
Okhla Phase I
NEW DELHI - 110 020

Ref. No.14-55/2021-PCI(A) | 3642-45

23 SEP 2021

To

- a) All institutions approved for D.Pharm Course.
- b) All State Governments (Technical Education and Health Departments) and admission making authorities.
- c) All Examining Authorities.

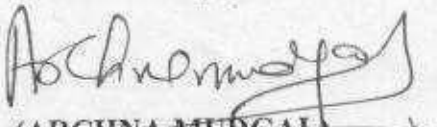
Sub: "Syllabus framed under Regulation 7, List of prescribed equipments and apparatus under Appendix-A of The Education Regulations, 2020 for Diploma Course in Pharmacy."

Sir/Madam

With reference to the subject cited above, it is informed that -

1. With due approval of the Ministry of Health and Family Welfare, Government of India, PCI has notified the Education Regulations, 2020 for Diploma course in Pharmacy in the Gazette of India, Extraordinary No. 435, Part-III, Section-4, dt.16.10.2020.
2. As empowered under regulation 7 and Appendix-A of ER-20, the PCI has framed the syllabus. A copy of the same titled as under is enclosed as **Annexure-I**.
"Syllabus framed under Regulation 7, List of prescribed equipments and apparatus under Appendix-A of The Education Regulations, 2020 for Diploma Course in Pharmacy."
3. It is for implementation and strict compliance from 2021-2022 academic session.

Yours faithfully


(ARCHANA MUDGAL)
Registrar-cum-Secretary



Annexure - I

Pharmacy Council of India New Delhi

“Syllabus framed under Regulation 7, List of prescribed equipment’s and apparatus under Appendix-A of The Education Regulations, 2020 For Diploma Course in Pharmacy”

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Study and report the local anaesthetic, mydriatic and mitotic effects of the given drug on the rabbit eye
2. Choose appropriate animal experiment model to study the effects of the given drugs acting on the central nervous system and submit the report
3. Perform the effects of given tissues (simulated) on isolated organs / tissues and interpret the results
4. Interpret the dose dependent responses of drugs in various animal experiment models Practical's.

Introduction to the following topics pertaining to the experimental pharmacology have to be discussed and documented in the practical manuals.

1. Introduction to experimental pharmacology

2. Study of laboratory animals
(a) Mice; (b) Rats; (c) Guinea pigs; (d) Rabbits
3. Commonly used instruments in experimental pharmacology
4. Different routes of administration of drugs in animals
5. Types of pre-clinical experiments: In-Vivo, In-Vitro, Ex-Vivo, etc. 6. Techniques of blood collection from animals

Experiments

Note: Animals shall not be used for doing / demonstrating any of the experiments given. The given experiments shall be carried out / demonstrated as the case may be, ONLY with the use of software program(s) such as "Ex Pharm" or any other suitable software

1. Study of local anaesthetics on rabbit eye
2. Study of Mydriatic effect on rabbit eye
3. Study of Miotic effect on rabbit eye
4. Effect of analgesics using Analgesiometer
5. Study of analgesic activity by writhing test
6. Screening of anti-convulsant using Electro Convulsiometer
7. Screening of Muscle relaxants using Rota-Rod apparatus
8. Screening of CNS stimulants and depressants using Actophotometer
9. Study of anxiolytic activity using elevated plus maze method
10. Study of effect of drugs (any 2) on isolated heart
11. Effect of drugs on ciliary motility on frog's buccal cavity
12. Pyrogen testing by rabbit method

Ex Pharm – Software

Trade Mark Registration Number - 2967042

List of Experiments

01-05. Experiment on effects of various drugs (Mydriatic, Miotic and Local Anaesthetic) on rabbit's eye.

01 - Epinephrine

02 - Atropine

03 - Ephedrine

04 - Physostigmine

05 - Lignocaine

06. Study of analgesic activity with the help of "Tail Flick Apparatus" (Analgesiometer).

07. Study of analgesic activity with the help of "Hot Plate Apparatus" (Analgesiometer).
08. To study analgesic activity by "Writhing Test".
09. Study of "Antihistaminic drugs/Anti allergic" drugs by mast cell stabilization method with help of "Histamine Chamber".
10. Study of "Muscle Relaxant" activity with the help of "Rota-Rod Apparatus".
11. Study of "CNS Depressants & Stimulants" Using "Actophotometer".
- 12-14. Study of drugs acting on CNS (Including Anxiolytic Activity) using following modules
 - a. Elevated Plus Maze Method
 - b. Pole Climbing Method
 - Evaluation of Anti Psychotic Drugs
 - Evaluation of Sedative Drugs
15. Study of anticonvulsant activity using "Electro Convulsimeter".
16. To study PTZ induced convulsions in mice.
17. Study of effect of hepatic microsomal enzyme inducers on the phenobarbitone sleeping time in mice.
18. To study the action of strychnine/ anaesthetic on frog neurons (excitability).
19. Test for pyrogens using rabbits.
20. Effect of drugs on isolated guinea pig ileum (in-vitro).
21. To study respiratory depression effect on rabbit.
22. Study of stereotype and anti-catatonic activity of drugs on mice.
23. Experiments on thyroid and antithyroid drugs
 - The effect of thyroxin, TSH and propylthiouracil on metabolism.
24. Experiments on blood sugar
 - The effect of insulin (hypoglycemic activity) and alloxan on blood glucose.
25. Study of anti-inflammatory activity using carrageenan induced paw oedema method
26. Study of diuretic activity using metabolic cage
- 27-30. Experiments on amphibian nerve-muscle (sciatic nerve and gastrocnemius muscle) preparation.
 27. Recording of Simple Muscle Twitch
 28. Effect of Temperature
 29. Effect of stimuli of increasing frequency.
 30. Effect of stimuli of increasing strength.
- 31-38. Experiment on effect of various drugs on isolated frog's heart. (DRC- Dose Response Curve)
 31. Epinephrine
 32. Norepinephrine
 33. Isoprenaline
 34. Calcium chloride
 35. Propranolol
 36. Acetylcholine
 37. Potassium chloride

38. Atropine sulphate

39-53. Experiments on effect of different drugs on dog BP & heart rate.

- Virtual Practice- Effects of drugs on the dog BP and heart rate.

39. Epinephrine (Adrenaline)

40. Norepinephrine (Noradrenaline)

41. Isoprenaline

42. Acetylcholine

43. Histamine

44. Ephedrine

45. Phentolamine

46. Propranolol

47. Atropine

48. Cimetidine

49. Carotid Occlusion

50. Central Vagus

51. Peripheral Vagus.

- Effects of vasopressor and vasodepressor with appropriate blockers.

52. Virtual Practice- Reversal action of adrenaline on blood pressure and heart rate.

53. Virtual Practice- Reversal action of acetylcholine on blood pressure and heart rate.

54-55. Experiments on "Lagendorff's Apparatus".

- Effect of coronary vasodilators on isolated heart

- Effect of parasympathomimetics

56. Recording of DRC, evaluation of effect of agonist and antagonist and bioassay of histamine using guinea pig ileum by matching method.

57-64. Recording of DRC & Bioassay on isolated tissues and organs by Matching, Interpolation, 3 Point & 4 Point Bioassay.

57-58. Recording of DRC and bioassay of acetylcholine using guinea pig ileum.

59-60. Recording of DRC and bioassay of oxytocin using rat uterine horn.

61-62. Recording of DRC and bioassay of serotonin using rat fundus strip.

63-64. Recording of DRC and bioassay of acetylcholine using rat ileum.

65-66. To record the DRC and to determine the pD₂ value for acetylcholine on frog rectus abdominis muscle.

67-68. To record the DRC and determination of pD₂ value of histamine on guinea pig ileum.

69-70. To record the DRC and determination of pD₂ value of serotonin on rat stomach (fundus part) strip.

71-72. To record the DRC and determination of pA₂ Value of prazosin using rat anococcygeus muscle (by Schilds plot method)

73. Study of anti-ulcer activity - using pylorus ligation method.

74. Evaluation of effect of acetylcholine (spasmogens) using rabbit jejunum.

75. Evaluation of effect of different drugs on ciliary motility.

76. Evaluation of effect of saline purgatives on frog intestine.

77-78. Determination of acute irritation of a test substance.

- Skin irritation (Including edema formation)
- Eye irritation

* In addition to above mentioned interactive experiments, modules are provided for following:

79. Animals used in experimental pharmacology.
80. Instruments used in experimental pharmacology.
81. Physiological salt solutions used in experimental pharmacology.
82. Different routes of drug administration.
83. Blood withdrawal techniques.
84. Methods of anaesthesia & euthanasia.
85. Dose calculation in pharmacological experiments.
86. Calculation of pharmacokinetic parameters.
87. Biostatistics methods in experimental pharmacology.

* **Additionally "Examination Mode" is provided for the experiments.**

* **Covers specific supportive physiology modules also, to provide better understanding of pharmacology modules.**

* **Separate observation table/finding download option is available for each student, with student name and experiment readings/findings.**

* **Freely accessible additional study material in form of lab manual with the complete content of each module.**
