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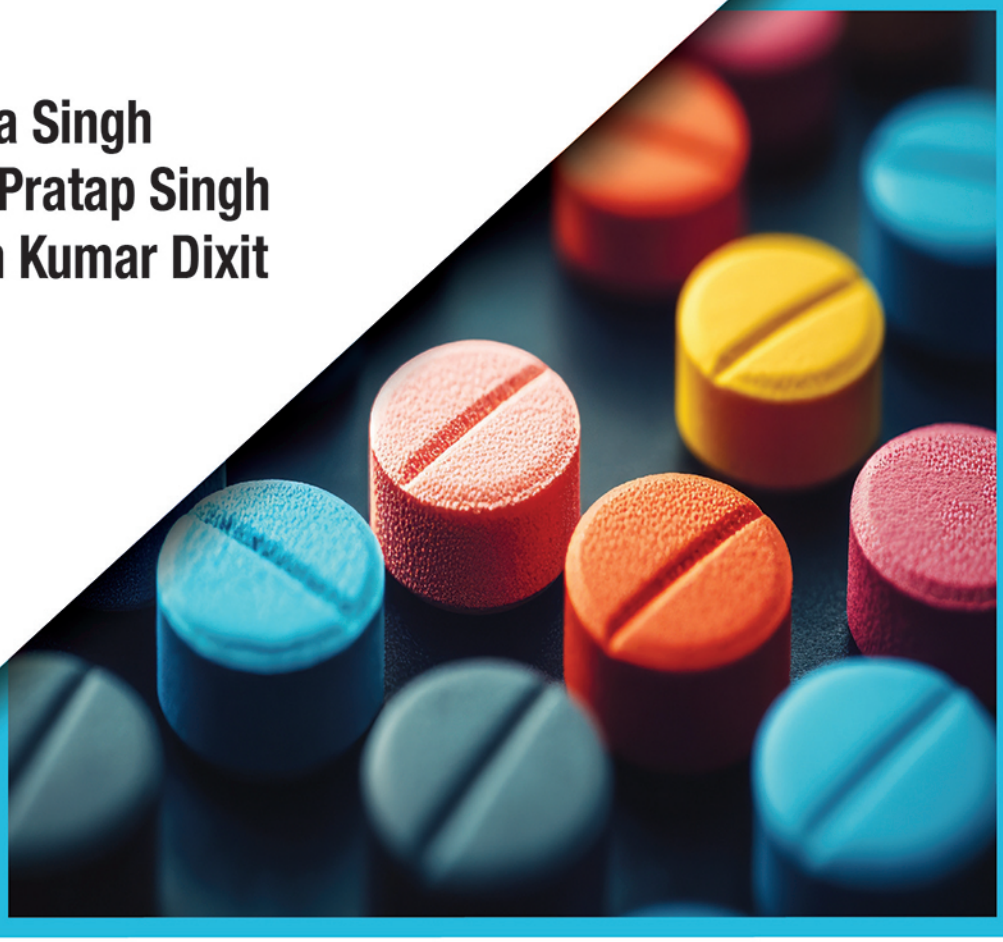
Competency Based LOGBOOK for 2nd Professional MBBS

Pharmacology

As per the Revised Competency-based Medical Education Curriculum (NMC)



Saumya Singh
Aditya Pratap Singh
Rakesh Kumar Dixit

3rd Edition

JAYPEE

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Section 1

Competency Assessment

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Skill Competencies of Pharmacology

S. No.	Topic	Competency addressed	Name of the activity	Date completed dd-mm-yyyy	Attempt at activity First only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations or numerical scores	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner
1.	General Pharmacology	Demonstrate the mechanism of action and effects of common prototype drugs on human body using computer assisted learning. PH 1.8							
2.	General Pharmacology	Describe changes in pharmacology of drugs in geriatric, pediatric and special situations such as pregnancy, lactation, hepatic and renal disorders and adjust the drug treatment accordingly. PH 1.10							
3.	General Pharmacology	Define adverse drug reactions (ADRs) and their types. Identify the ADRs in the given case scenario and assess causality. PH 1.11							
4.	Autonomic and Peripheral Nervous System, Autacoids	Describe types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of cholinergic and anticholinergic drugs and demonstrate OPC poisoning management. PH 2.2							

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5.	Autonomic and Peripheral Nervous System, Autacoids	Explain the rationale and demonstrate the emergency use of various sympathetic and parasympathetic drug agonists/ antagonists (like Noradrenaline/ Adrenaline/ Dopamine/ Dobutamine, Atropine) in case-based scenarios. PH 2.3							
6.	Autonomic and Peripheral Nervous System, Autacoids	Explain types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of local anesthetics (LA) and demonstrate various methods of administration of LA. PH 2.5							
7.	Autonomic and Peripheral Nervous System, Autacoids	Devise management plan for a case of gout, arthritis and migraine using appropriate drugs. PH 2.8							
8.	Central Nervous System	Describe types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used in epilepsy and devise management plan for a case of uncontrolled seizure. PH 3.3							

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S. No.	Topic	Competency addressed	Name of the activity	Date completed dd-mm-yyyy	Attempt at activity First only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations or numerical scores	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner
9.	Central Nervous System	Describe types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs of opioid analgesics and explain the special instructions for use of opioids. PH 3.4							
10.	Central Nervous System	Describe types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used for depression and psychosis, devise management plan for depressive and psychotic disorders. PH 3.5							
11.	Central Nervous System	Describe types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used in anxiety disorders. Discuss about general goals of pharmacotherapy for the management of above disorders. PH 3.6							
12.	Central Nervous System	Identify and manage methanol poisoning and chronic ethanol intoxication. PH 3.8							

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S. No.	Topic	Competency addressed	Name of the activity	Date completed dd-mm-yyyy	Attempt at activity First only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations or numerical scores	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner
13.	Cardiovascular System and Blood	Explain types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs acting on coagulation system (Coagulants/anticoagulants) and devise a plan to monitor therapy and management of adverse effects. PH 4.2							
14.	Cardiovascular System and Blood	Describe types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used for the management of ischemic heart disease (stable, unstable angina and myocardial infarction), peripheral vascular disease and devise management plan for a patient of acute myocardial infarction. PH 4.8							

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S. No.	Topic	Competency addressed	Name of the activity	Date completed dd-mm-yyyy	Attempt at activity First only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations or numerical scores	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner
15.	Cardiovascular System and Blood	Explain salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used for the management of heart failure. Devise management plan for heart failure patients and describe the strategies to prevent long term complications of heart failure. PH 4.9							
16.	Cardiovascular System and Blood	Explain salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used for cardiac arrhythmias. Devise a plan to manage a patient with supraventricular, ventricular arrhythmias, cardiac arrest and fibrillations. PH 4.10							

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S. No.	Topic	Competency addressed	Name of the activity	Date completed dd-mm-yyyy	Attempt at activity First only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations or numerical scores	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner
17.	Respiratory System	Devise management of various stages of Bronchial asthma, COPD. Explain salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used for the management of Bronchial asthma, COPD and Rhinitis. PH 5.1							
18.	Gastrointestinal System	Describe salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used for the management of diarrhea and devise pharmacotherapeutic plan to manage acute and chronic diarrhea in adults and children. PH 6.3							
19.	Gastrointestinal system	Describe salient pharmacokinetics, pharmacodynamics, adverse drug reactions of drugs used for the management of constipation and devise management plan for a case of constipation. PH 6.4							

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S. No.	Topic	Competency addressed	Name of the activity	Date completed dd-mm-yyyy	Attempt at activity First only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations or numerical scores	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner
20.	Endocrine System	Explain the types, kinetics, dynamics, adverse effects, indications and contraindications of corticosteroids and communicate to patient the appropriate use of corticosteroids. PH 7.5							
21.	Endocrine System	Explain the types, kinetics, dynamics, adverse effects, indications and contraindications of drugs which modify female reproductive functions including contraceptives. Explain the important instruction for use of female and male contraceptives. PH 7.7							
22.	Chemotherapy	Devise a pharmacotherapeutic plan for UTI and STDs and explain to patient the instructions and adherence to treatment. PH 8.4							
23.	Chemotherapy	Explain the types, kinetics, dynamics, therapeutic uses and adverse effects of drugs used in tuberculosis. Devise management plan for tuberculosis treatment in various categories. PH 8.5							

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S. No.	Topic	Competency addressed	Name of the activity	Date completed dd-mm-yyyy	Attempt at activity First only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations or numerical scores	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner
24.	Applied Pharmacology	Perform a critical appraisal of a given prescription and suggest ways to improve it. PH 10.6							
25.	Applied Pharmacology	Describe pharmacogenomics and pharmacoeconomics and manage genomic and economic issues in drug use and find out the price of given medication(s). PH 10.7							
26.	Applied Pharmacology	Describe essential medicines, fixed dose combination, over the counter drugs and explain steps to choose essential medicines. PH 10.8							
27.	Applied Pharmacology	Identify and apply drug regulations principles, acts and legal aspects related of drug discovery and clinical use. PH 10.11							
28.	Applied Pharmacology	Communicate with the patient regarding optimal use of a drug therapy using empathy and professionalism, e.g., oral contraceptives, anti TB drugs, etc. PH 10.14							

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S. No.	Topic	Competency addressed	Name of the activity	Date completed dd-mm-yyyy	Attempt at activity First only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations or numerical scores	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner
29.	Applied Pharmacology	Demonstrate an understanding of the caution in prescribing drugs likely to produce dependence and recommend the line of management. PH 10.16							
30.	Applied Pharmacology	Demonstrate ability to educate public and patients about various aspects of drug use including drug dependence and OTC drugs. PH 10.17							

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Add on Competencies as Decided by the Department of Pharmacology

S. No.	Competency addressed	Name of the activity	Date completed dd-mm-yyyy	Attempt at activity First only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations or numerical scores	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner

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Competencies of the Procedures for Certification

S. No.	Competency addressed	Name of the activity	Number required to certify P (Perform)	Date completed dd-mm-yyyy	Attempt at activity First only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations or numerical scores	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner
1.	Identify the common drug formulations and drug delivery systems, demonstrate their use and describe their advantages and disadvantages. PH 1.4		1						
2.	Describe various routes of drug administration, their advantages and disadvantages and demonstrate administration of, e.g., SC, IV, IM, SL, rectal, spinal, sublingual, intranasal sprays and inhalers. PH 1.5		2						
3.	Define Pharmacovigilance its principles and demonstrate ADR reporting. PH 1.12		2						
4.	Identify and describe the management of drug interactions. PH 1.13		1						

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S. No.	Competency addressed	Name of the activity	Number required to certify P (Perform)	Date completed dd-mm-yyyy	Attempt at activity First only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations or numerical scores	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner
5.	Compare and contrast different sources of drug information and update on latest information on drugs. PH 10.1		2						
6.	Perform a critical evaluation of the drug promotional literature and Interpret the package insert information contained in the drug package. PH 10.2		1						
7.	To prepare and explain a list of P-drugs for a given case/condition. PH 10.3		2						
8.	Describe parts of a correct, rational and legible prescription and write rational prescriptions for the provided condition. (e.g., conditions to be used are given with other relevant competencies). PH 10.4		5						

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S. No.	Competency addressed	Name of the activity	Number required to certify P (Perform)	Date completed dd-mm-yyyy	Attempt at activity First only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations or numerical scores	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner
9.	Calculate the dosage of drugs for an individual patient, including children, elderly, pregnant and lactating women and patients with renal or hepatic dysfunction. PH 10.9		1						
10.	Demonstrate how to optimize interaction with pharmaceutical representative/ media to get/ disseminate authentic information on drugs. PH 10.13		2						
11.	Describe methods to improve adherence to treatment and motivate patients with chronic diseases to adhere to the prescribed pharmacotherapy. PH 10.15		2						

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Certifiable Competencies in Pharmacology

Competency PH 1.4: Identify the common drug formulations and drug delivery systems, demonstrate their use and describe their advantages and disadvantages.

Specific Learning Objectives (SLOs):

1.

2.

3.

4.

Description of the Module:

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Competency Based LOGBOOK for 2nd Professional MBBS

Pharmacology

This logbook is designed as per the latest guidelines of logbook module 2024 shared by NMC for implementation of Competency-based Medical Curriculum and recommended to be followed for the MBBS students from the academic year 2024–2025 onward. This logbook of Pharmacology is a verified record of the progression of the learner, documenting the acquisition of the requisite, knowledge, skills, attitude, and competencies. It is a tool that guides medical students by highlighting important clinical objectives promoting self-reflection, providing an opportunity to obtain feedback from preceptors and the records can be used for formative and continuous assessment. Also this logbook is an academic document that becomes both a snapshot of the progress of the learner as well as a prerequisite for progression to the next phase of learning or graduation from the course.

Salient Features

- Predefined skill competencies of Pharmacology are given in the UG curriculum module, Volume I, 2024 for recording the activities conducted in a simple tabulated format based on NMC Logbook module
- Separate section is provided for competencies needed for certification in the subject
- Separate empty tables are provided for competencies needed by the department of Pharmacology
- Separate sections are provided for Alignment and Integration Topics (AITo), SDL, and Humanities and Extracurricular activities with ample space for reflective writing of the subject
- Separate section of AETCOM is dedicated to Microbiology with modules and reflective writing space
- Separate section of pandemic management for 2nd year MBBS with modules and reflective writing space
- Separate sections are provided for recording the details of assignment and assessment
- Separate sections are provided for attendance record of the students and attending extra classes for poor attendance

Saumya Singh MBBS (Hons) MD (Microbiology) is Professor and Head, Infection Control Officer, and In-charge of Molecular Laboratory, Department of Microbiology, United Institute of Medical Sciences, Prayagraj, Uttar Pradesh, India. She has published several scientific research papers in national and international journals. She has undergone training in BCME, ACME, and NABL internal auditors training course (Kolkata). She is an active member in Medical Education Unit (MEU) at her institute along with curriculum in-charge for 2nd year MBBS. She is fascinated by innovative teaching and promotes research work helping her compile this logbook.



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