



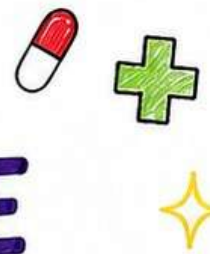
5 MARKS IMPORTANT QUESTIONS

• D. Pharm •

2nd YEAR



LABELLING OF DISPENSED MEDICINE



DEFINITION

- Attaching a **clear** and **accurate** label to the medicine container with essential information for **safe** and **correct** use.

PURPOSE

- **Correct** identification
- **Correct** administration
- Patient **safety**
- **Proper** storage

ESSENTIAL INFORMATION

1. Name of the **patient**
2. Name & strength of **medicine**
3. **Dosage** form
4. **Directions** for use
5. **Quantity** dispensed
6. **Date** of dispensing
7. Name & address of pharmacy
8. Prescription / Serial No.
9. Storage instructions
10. Expiry / Beyond-use date
11. Special warning / caution

1. Patient Name

2. Medicine Name & Strength

3. Dosage Form

4. Directions for use

5. Quantity Dispensed

6. Date of Dispensing



7. Pharmacy Name & Address

8. Prescription No.

9. Storage Instruction

10. Expiry Date

11. Special Warning

COMMON AUXILIARY LABELS

- Suspensions → **Shake well before use**
- External preparations → **For external use only**
- Eye preparations → **For ophthalmic use only**
- Drowsiness causing drugs → **May cause drowsiness**
- Refrigerated medicines → **Keep refrigerated**

A good label is **clear**, **legible**, **accurate**, **concise** and easy for the patient to understand.

★ **Exam Ready!**



RIFAMPICIN



1. DEFINITION

- First-line **antitubercular** drug.
- **Rifamycin** antibiotic.

2. MECHANISM

- Inhibits **DNA-dependent RNA polymerase**.
- Stops **RNA synthesis**.

3. USES

- Tuberculosis.
- Leprosy.
- Meningococcal prophylaxis.

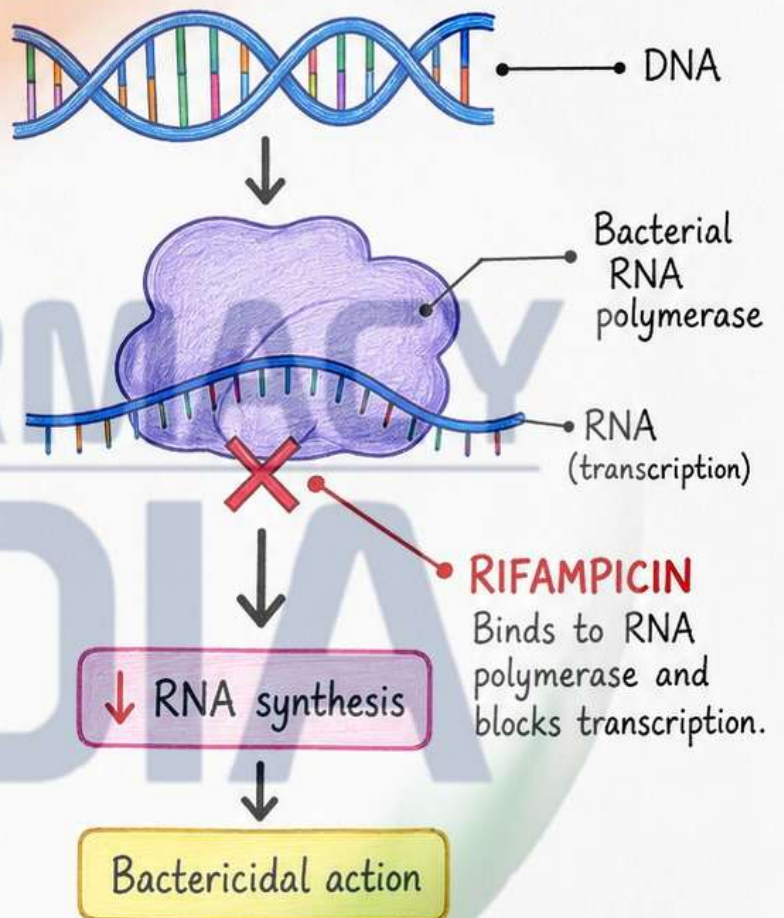
4. ADVERSE EFFECTS

- Hepatotoxicity.
- Orange-red body fluids.
- Flu-like syndrome.

5. IMPORTANT POINT

- Strong **enzyme inducer**.
- Used in **combination therapy**.

MECHANISM OF ACTION



DEFINITION

Receptors are specific proteins that recognize and bind a drug and initiate a **response**.

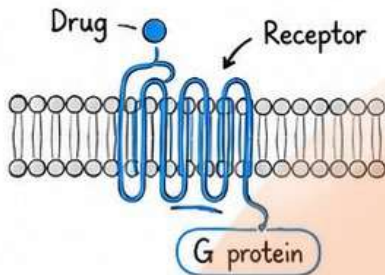
DRUG RECEPTORS

— Sites where drugs act to produce their effects —

KEY POINTS

- High affinity → High binding
- Low affinity → Low binding
- Receptor activation → Response

① G PROTEIN-COUPLED RECEPTORS (GPCR)



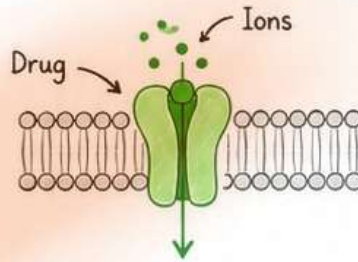
Found in :
Cell membrane

Mechanism :
Activate G protein →
Second messenger
(cAMP, IP₃, DAG, Ca²⁺)

Examples :

- β-Adrenergic receptor
- Muscarinic receptor
- Dopamine D₂ receptor

② ION CHANNEL RECEPTORS



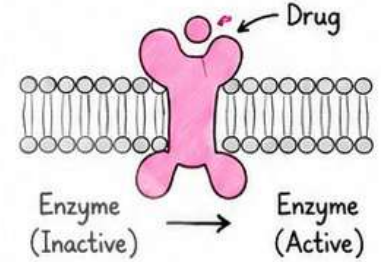
Found in :
Cell membrane

Mechanism :
Drug binds → Opens or
closes ion channel →
Ion flow → Response

Examples :

- GABA_A receptor (Cl⁻ channel)
- Nicotinic ACh receptor (Na⁺ channel)
- NMDA receptor (Ca²⁺ channel)

③ ENZYME-LINKED RECEPTORS



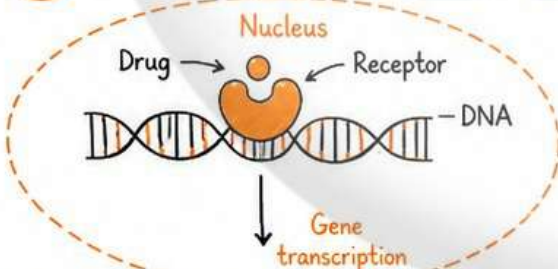
Found in :
Cell membrane

Mechanism :
Drug binds → Activates
enzymatic activity →
Response

Examples :

- Insulin receptor (Tyrosine kinase)
- EGF receptor
- Trk (NGF) receptor

④ NUCLEAR RECEPTORS



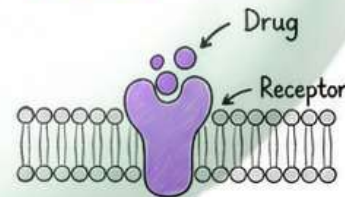
Found in :
Cytoplasm or nucleus

Mechanism :
Drug binds → Receptor-drug complex → Binds DNA →
Changes gene transcription → Response (Slow onset)

Examples :

- Glucocorticoid receptor
- Thyroid hormone receptor
- Vitamin D receptor

⑤ OTHERS



Found in :
Cell membrane / Cytoplasm

Mechanism :
Varies (e.g., enzyme inhibition or structural interaction)

Examples :

- Guanylate cyclase linked receptor
- Intracellular enzymes (e.g., PDE inhibitors)

☆ EXAM PEARL

Receptor type determines **onset**, **duration**, and **intensity** of drug action.

GPCR → Fast | Nuclear receptors → Slow

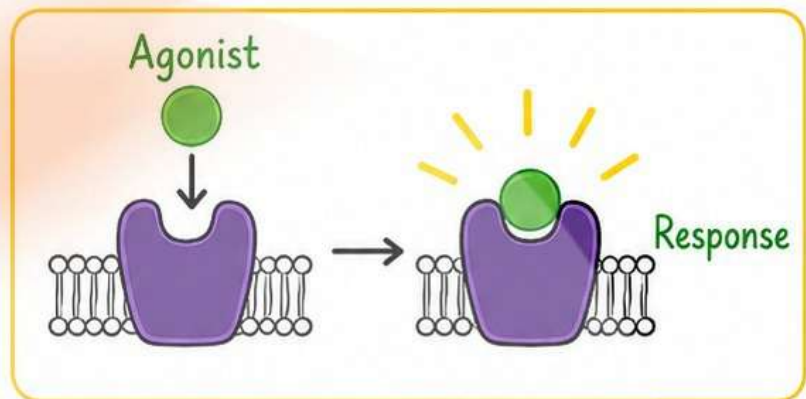
AGONIST vs ANTAGONIST

Both bind to receptors, but their effects are **opposite**.



AGONIST

- Binds to the receptor.
- **Activates** the receptor.
- Produces a biological response.
- Has **intrinsic activity**.
- Increases the normal activity of the system.

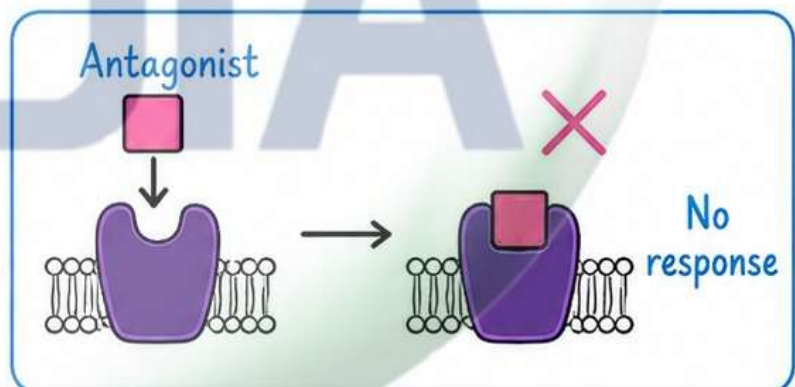


Example : Adrenaline at β_1 -receptor

VS

ANTAGONIST

- Binds to the receptor.
- Does NOT **activate** the receptor.
- Does NOT produce a biological response.
- Has **no intrinsic activity**.
- **Blocks** agonist from binding or reduces its effect.



Example : Propranolol at β -receptor

★ KEY POINT

- Agonist → **Activates** receptor → Produces response
- Antagonist → **Blocks** receptor / agonist → No response

Agonist = KEY



Antagonist = LOCK





SUBMITTING APPLICATION FOR RETAIL SALE LICENCE



1. Meaning

- Application is submitted to obtain permission for retail sale of drugs.
- It is filed with the State Licensing Authority.

2. Application Form

- Use **Form 19** for retail sale licence.
- For Schedule X retail sale, application is in **Form 19C**.

3. Licence Issued

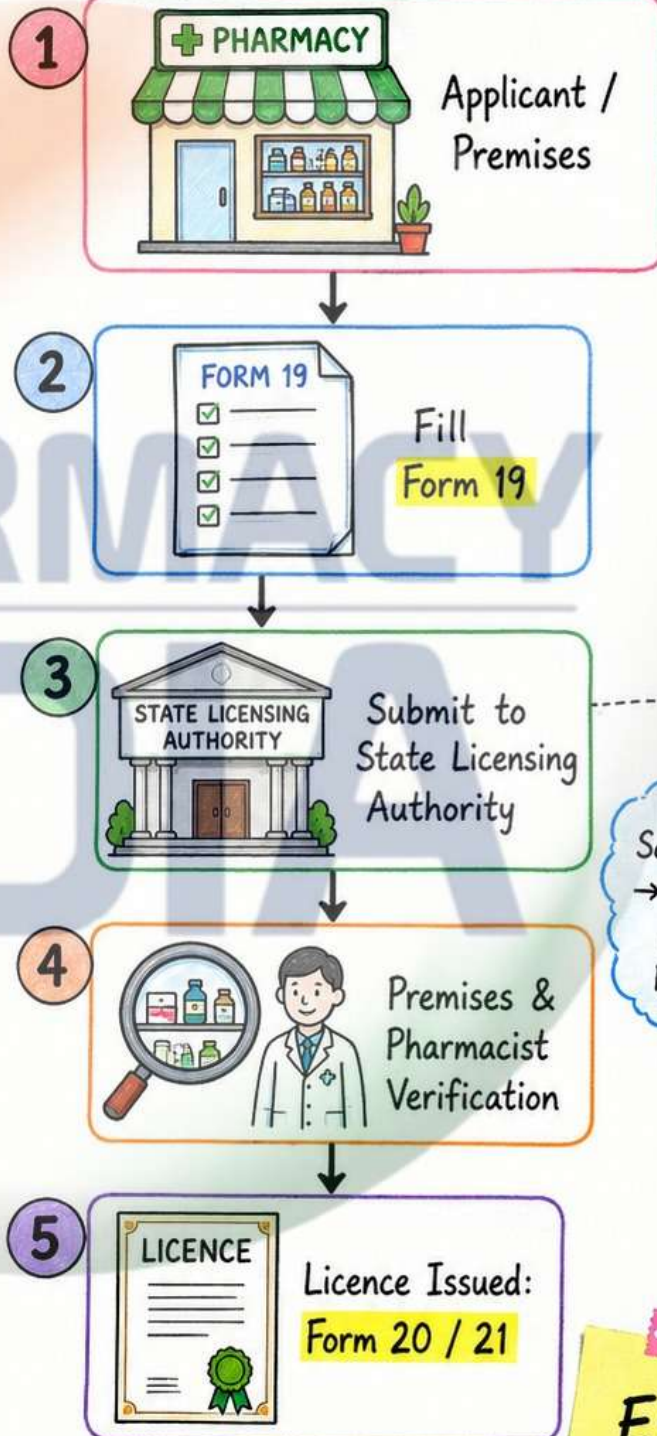
- **Form 20**: retail sale of drugs other than Schedule C, C(1) and X.
- **Form 21**: retail sale of Schedule C and C(1) drugs, excluding Schedule X.
- **Form 20F**: retail sale of Schedule X drugs.

4. Basic Requirements

- Premises area: minimum **10 m²** for retail pharmacy.
- **15 m²** if retail and wholesale are combined.
- Personal supervision of a Registered Pharmacist.
- Proper storage and refrigerator for temperature-sensitive drugs.
- Premises should comply with **Schedule N**.

5. Quick Points

- Separate licence for each place of business.
- Prescribed fee commonly asked in exams: **₹1,500**.
- Keep all records and documents ready for inspection.



Exam Ready!



BEST BOOKS FOR D.PHARMA 2ND YEAR
Bilingual Book (द्विभाषी पुस्तक)

As per the
PCI syllabus
of 1st & 2nd semesters

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D.Pharm 2nd Year

MISSION BIEUP

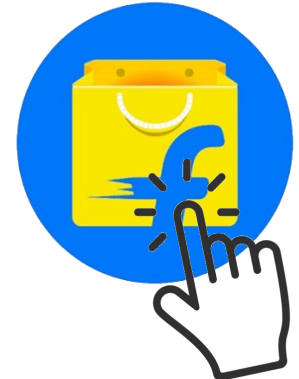
Bilingual (Hindi+English)

1 BOOK कितनाब | **2** LANGUAGE भाषाएँ | **6** SUBJECT विषय

FULLY COLOURED IMAGE | **306** TABLETS WITH IMAGES | **1260** ONE MARK QUESTIONS | **FREE PRACTICE QUESTIONS**

Subjects Covered

- PHARMACOLOGY
- COMMUNITY PHARMACY & MANAGEMENT
- BIOCHEMISTRY & CLINICAL PATHOLOGY
- PHARMACOTHERAPEUTICS
- HOSPITAL & CLINICAL PHARMACY
- PHARMACY LAW & ETHICS



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