

GPAT

2027-28



PHARMACEUTICS

CLASS- 10



TIME- 8 : 30 P.M

MONOPHASIC LIQUID DOSAGE FORM

UPDATED QUESTIONS *TILL GPAT 2026*

GPAT



VIDEO
LECTURE



PDF



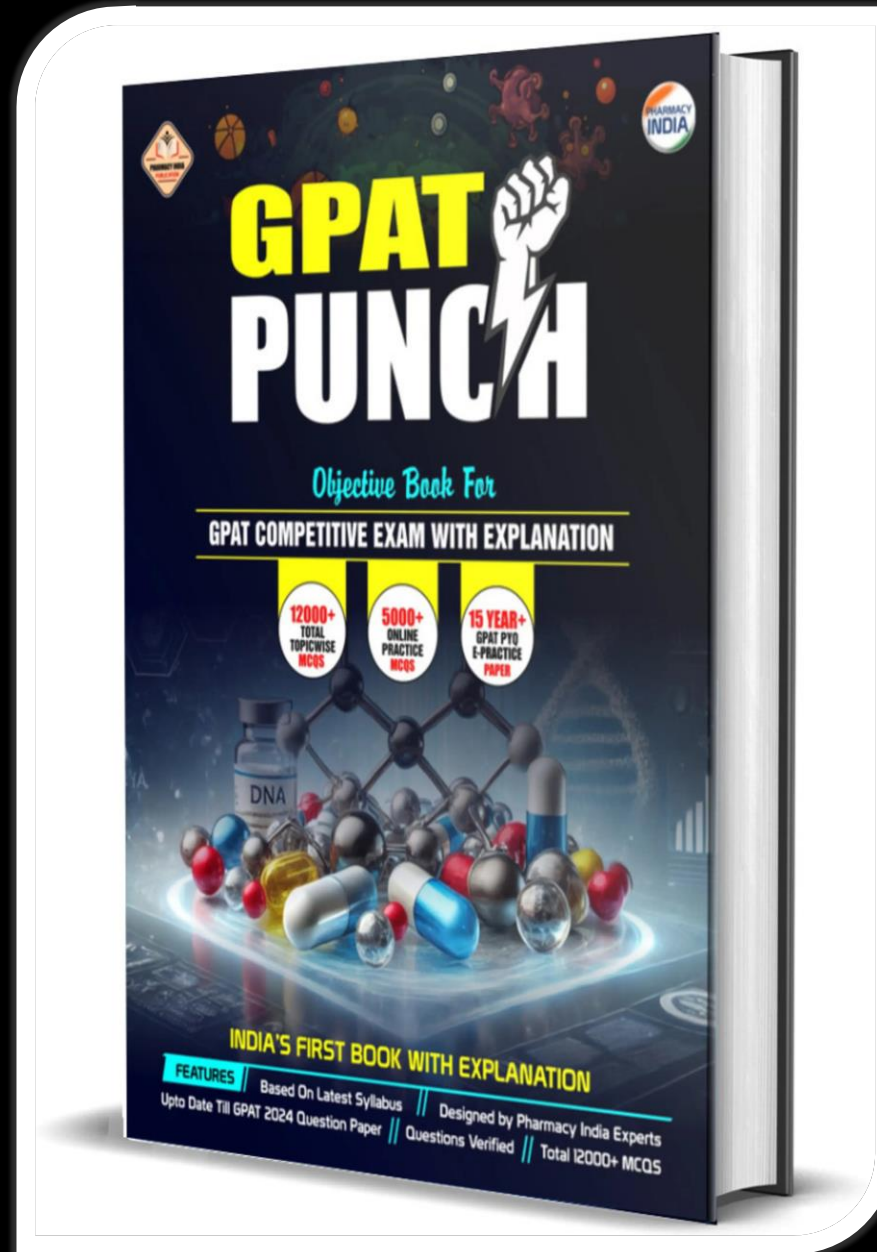
**STEP 1 – DOWNLOAD PHARMACY INDIA
MOBILE APP FROM PLAY STORE**

**STEP 2 – VISIT STORE OPTION – SEARCH
GPAT – ACCESS PDF + VIDEO**

Best Book for GPAT Exam

AVAILABLE ON

Flipkart  amazon



GPAT PUNCH OBJECTIVE BOOK

- Based on Latest Syllabus
- Up to Date Till GPAT 2026 Question Paper
- 5000+ Online Practice MCQs
- Total 12000+ MCQs
- 15 Year+ GPAT PYQ E-Practice Paper

ARJUNA SERIES

GPAT 2027 - 28

ADMISSION OPEN



400+ Live Classes



DPP After Topic Completion



700+ Pre-Recorded Lectures



GPAT Syllabus Completion



4-7 Live Classes Weekly



400+ Online Test Series



25,000+ Questions for Practice



Weekend Surprise Test



Weekend Doubt Session



Previous Year & Model Paper Discussion



Digital Library



**DOWNLOAD PHARMACY INDIA
APP FROM PLAY STORE**



6396274917

6395596959

DAILY UPDATES
जुड़िए PHARMACY INDIA
के साथ.....

WHATSAPP & TELEGRAM SE JUDNE KE LIYE
ICONS PAR CLICK KARE





@PharmacyIndia

01.

According to the United States Pharmacopoeia, if one part of solute requires 10 to 30 parts of the solvent, it is described as: **[GPAT 2026]**

- (a) Sparingly soluble
- (b) Slightly soluble
- (c) Freely soluble
- (d) Soluble



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia

01.

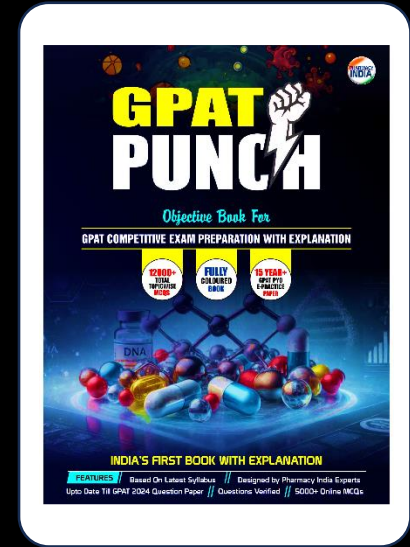
According to the United States Pharmacopoeia, if one part of solute requires 10 to 30 parts of the solvent, it is described as: [GPAT 2026]

(a) Sparingly soluble

(b) Slightly soluble

(c) Freely soluble

(d) Soluble



Download Pharmacy India Mobile App from Playstore

SOLUBLE = 10–30 PARTS SOLVENT



Official solubility term based on parts of solvent required.



“Soluble” = 10 to 30 parts solvent for 1 part solute.



“Freely soluble” = 1 to 10 parts solvent.



“Sparingly soluble” = 30 to 100 parts solvent.



“Slightly soluble” = 100 to 1000 parts solvent.

EXAMPLE: SOLUBLE

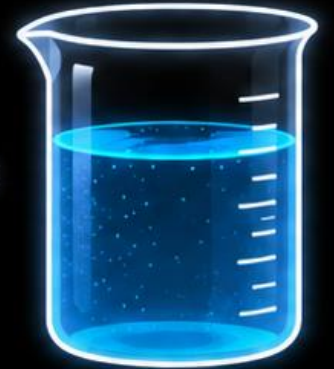


1 PART
SOLUTE

+



10–30 PARTS
SOLVENT



SOLUTION
(SOLUBLE)

1 PART SOLUTE DISSOLVED IN
10–30 PARTS SOLVENT



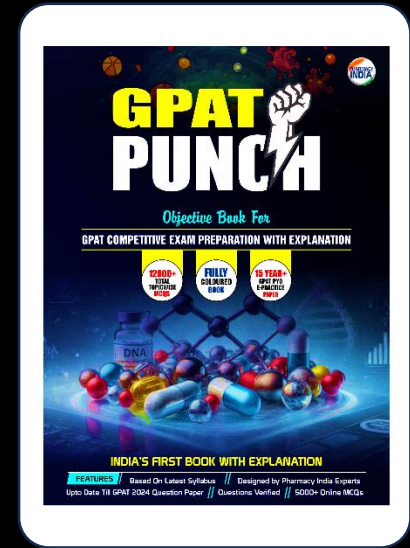
More solvent needed = lower solubility.



02.

In the context of syrup preparation, what is the negative result of “inversion” caused by excessive heat? [GPAT 2026]

- (a) The viscosity increases until the syrup becomes solid
- (b) The syrup becomes susceptible to fermentation and darkens in color
- (c) The sucrose crystallizes out of the solution immediately
- (d) The syrup becomes less sweet



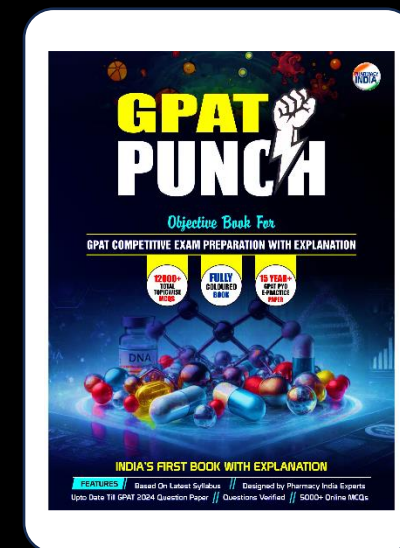
Download Pharmacy India Mobile App from Playstore



02.

In the context of syrup preparation, what is the negative result of “inversion” caused by excessive heat? [GPAT 2026]

- (a) The viscosity increases until the syrup becomes solid
- (b) The syrup becomes susceptible to fermentation and darkens in color**
- (c) The sucrose crystallizes out of the solution immediately
- (d) The syrup becomes less sweet

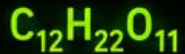
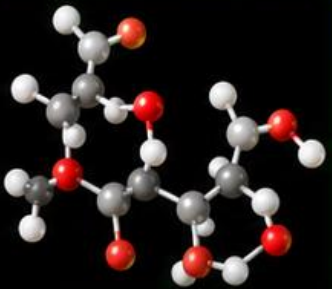


Download Pharmacy India Mobile App from Playstore

EXCESS HEAT CAUSES INVERSION

SUCROSE

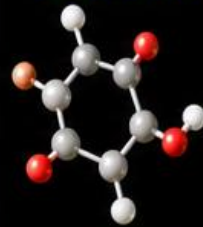
(TABLE SUGAR)



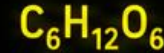
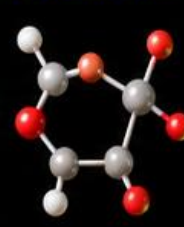
INVERSION

(HYDROLYSIS)

GLUCOSE



FRUCTOSE



INVERT SUGAR

(GLUCOSE + FRUCTOSE)

FERMENTATION



INVERT SUGAR
INCREASES
RISK OF
FERMENTATION

DARKENING



HEATING MAY
DARKEN SYRUP
DUE TO
CARAMELIZATION



INVERSION

= HYDROLYSIS OF
SUCROSE INTO
GLUCOSE AND FRUCTOSE.



EXCESSIVE HEAT

ACCELERATES INVERSION
DURING SYRUP
PREPARATION.



INVERT SUGAR

INCREASES RISK OF
FERMENTATION.



HEATING MAY

DARKEN SYRUP DUE TO
CARAMELIZATION.



CONTROLLED TEMPERATURE

IS IMPORTANT IN
SYRUP MAKING.



CONTROLLED TEMPERATURE = QUALITY SYRUP



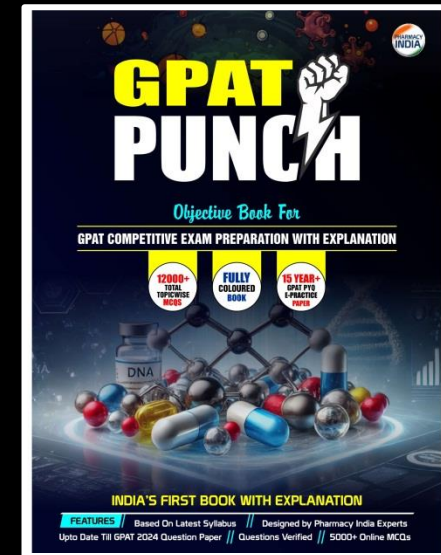
@PharmacyIndia

03.

According to USP, sparingly soluble refers to how many parts of solvent required to dissolve one part of solute?

[GPAT 2025]

- (a) From 30 to 100
- (b) From 1000 to 10000
- (c) From 10 to 30
- (d) From 100 to 1000



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia



03.

According to USP, sparingly soluble refers to how many parts of solvent required to dissolve one part of solute?

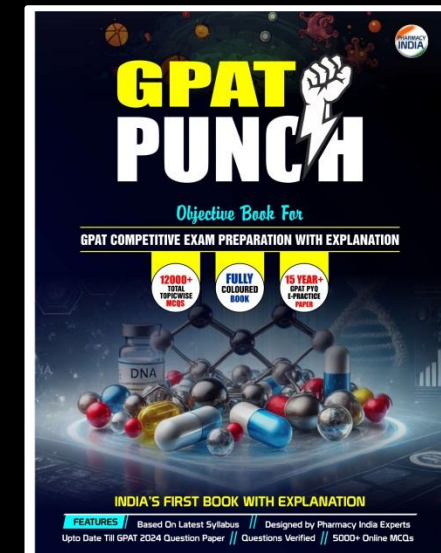
[GPAT 2025]

(a) From 30 to 100

(b) From 1000 to 10000

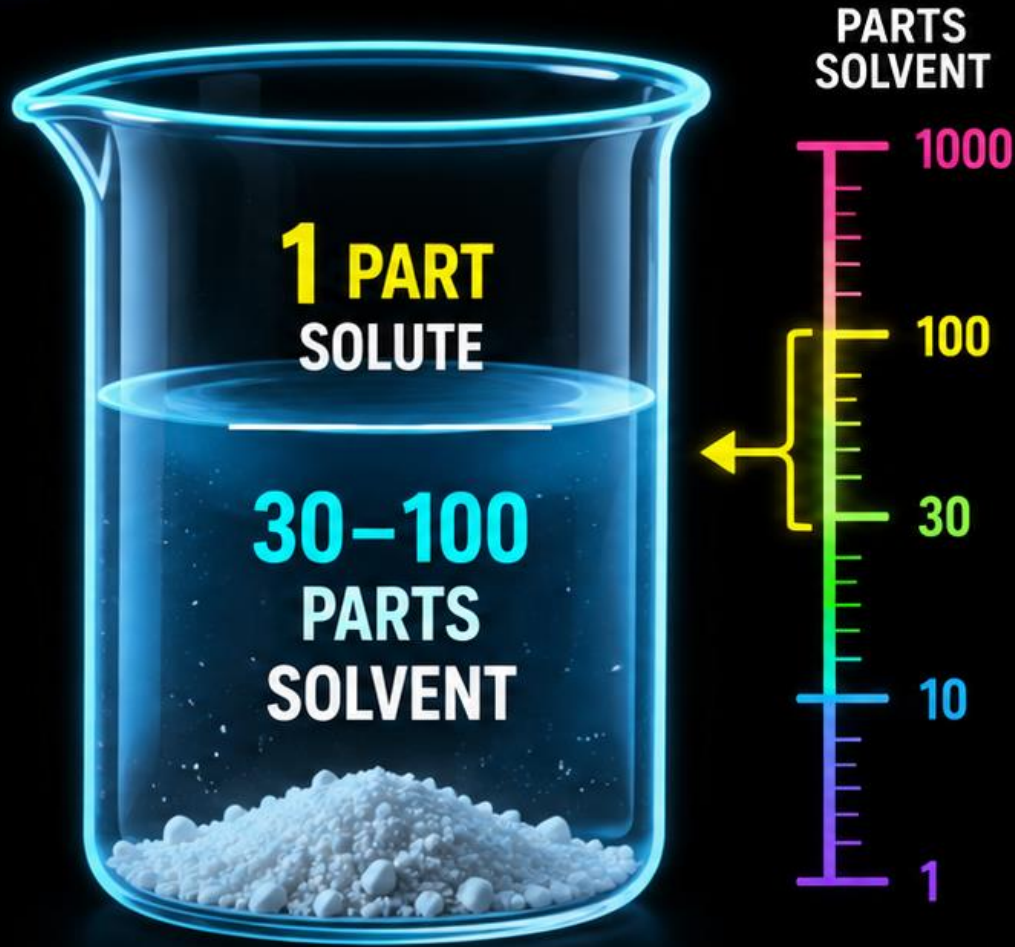
(c) From 10 to 30

(d) From 100 to 1000



Download Pharmacy India Mobile App from Playstore

SPARINGLY SOLUBLE = 30–100 PARTS



SPARINGLY SOLUBLE

"Sparingly soluble" means **1 part** solute needs **30–100 parts** solvent.



SOLUBLE = 10–30 PARTS

1 part solute needs **10–30 parts** solvent.



SLIGHTLY SOLUBLE = 100–1000 PARTS

1 part solute needs **100–1000 parts** solvent.



OFFICIAL SOLUBILITY TERMS

Official solubility terms guide formulation choice.



SOLUBILITY TERMS = **PRACTICAL GUIDE** FOR FORMULATION DECISIONS



@PharmacyIndia



04.

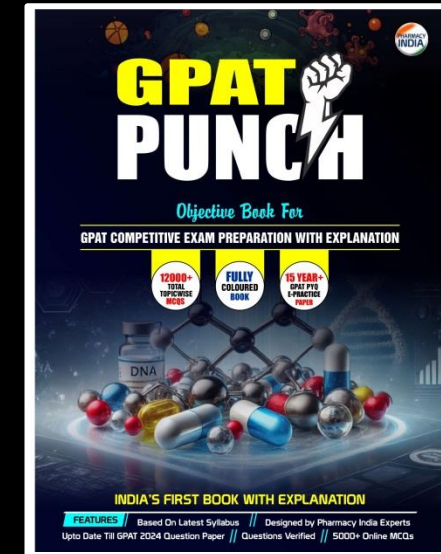
Clear, sweetened hydroalcoholic solutions intended for oral use, usually flavored to enhance palatability, are called: [GPAT – 2023 SHIFT-I, II]

(a) Aromatic waters

(b) Elixirs

(c) Syrups

(d) Tinctures



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia

04.

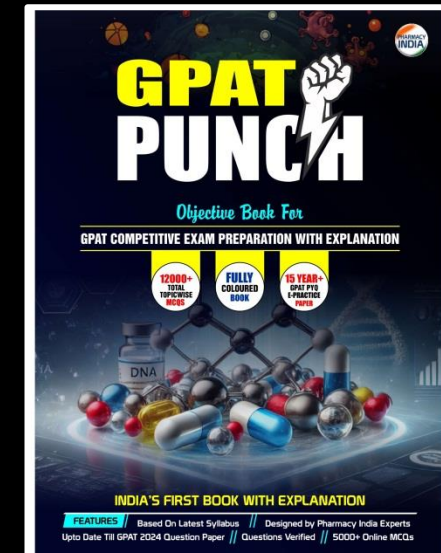
Clear, sweetened hydroalcoholic solutions intended for oral use, usually flavored to enhance palatability, are called: [GPAT – 2023 SHIFT-I, II]

(a) Aromatic waters

(b) Elixirs

(c) Syrups

(d) Tinctures



Download Pharmacy India Mobile App from Playstore

ELIXIRS



- ✓ Clear, sweetened **hydroalcoholic** oral solutions.
- ✓ Usually **flavored** to improve palatability.
- ✓ Alcohol helps **dissolve poorly water-soluble drugs**.
- ✓ **Less viscous** than syrups.

CONTAINS



WATER

+



ALCOHOL

(e.g., 10–25% v/v)

USUALLY FLAVORED



CHERRY



ORANGE



GRAPE



MINT

VISCOSITY COMPARISON

ELIXIR

(Less viscous)



Flows easily

SYRUP

(More viscous)



Flows slowly



@PharmacyIndia



05.

Select the correct option for miscible solvents: [GPAT – 2022]

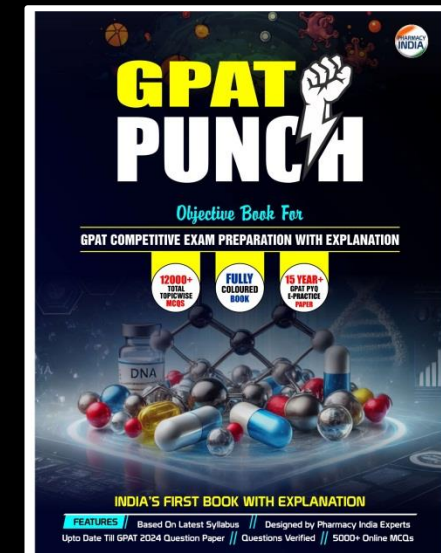
- [A] Water and alcohol
- [B] Acetone and alcohol
- [C] Water and benzene
- [D] Carbon tetrachloride and benzene

(a) A and B only

(b) A, B and C only

(c) A, B and D only

(d) A and D only



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia



05.

Select the correct option for miscible solvents: [GPAT – 2022]

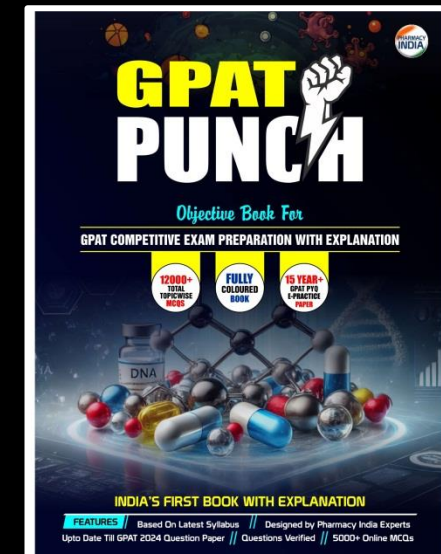
- [A] Water and alcohol
- [B] Acetone and alcohol
- [C] Water and benzene
- [D] Carbon tetrachloride and benzene

(a) A and B only

(b) A, B and C only

(c) A, B and D only

(d) A and D only



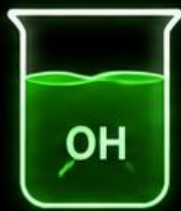
Download Pharmacy India Mobile App from Playstore

MISCIBLE SOLVENTS



WATER

+



ALCOHOL

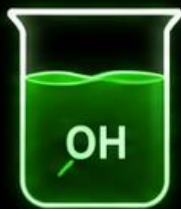


- Water + alcohol = **miscible**.



ACETONE

+



ALCOHOL



- Acetone + alcohol = **miscible**.



CARBON
TETRACHLORIDE

+



BENZENE



- Carbon tetrachloride + benzene = **miscible**.



WATER

+



BENZENE



- Water + benzene = **immiscible**.



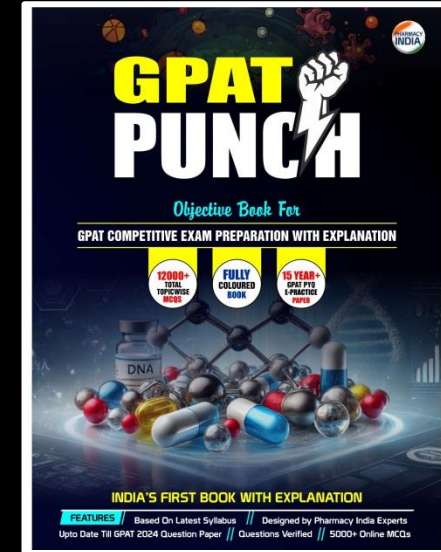
SIMILAR POLARITY FAVORS MIXING.



@PharmacyIndia

06. An elixir contains 47% v/v alcohol. What is the proof spirit according to USP? [GPAT – 2024]

- (a) 91%
- (b) 82%
- (c) 70%
- (d) 63%



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia

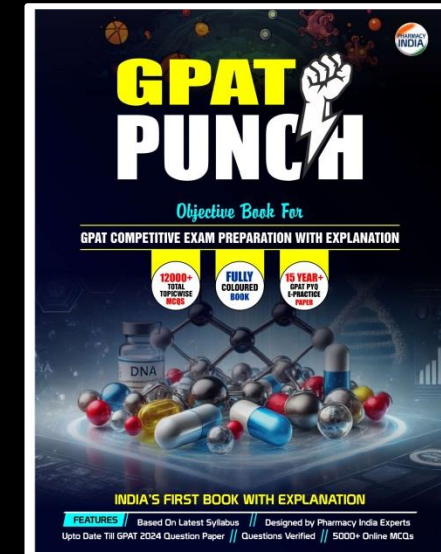
06. An elixir contains 47% v/v alcohol. What is the proof spirit according to USP? [GPAT – 2024]

(a) 91%

(b) 82%

(c) 70%

(d) 63%



Download Pharmacy India Mobile App from Playstore

47% ALCOHOL $\approx$ 82 PROOF



- **Proof spirit** expresses alcoholic strength.



- **100 proof** $\approx$ **57.1%** v/v alcohol.



- **Proof strength** =
alcohol % $\times$ 100 / 57.1.

Proof strength =

$$\frac{\text{alcohol \%} \times 100}{57.1}$$

CALCULATION FOR 47% ALCOHOL

Proof strength
=

$$\rightarrow \frac{47 \times 100}{57.1} \rightarrow \frac{4700}{57.1} \rightarrow \approx \underline{\underline{82 \text{ PROOF}}}$$



Therefore, **47% v/v alcohol** $\approx$ **82 proof**.

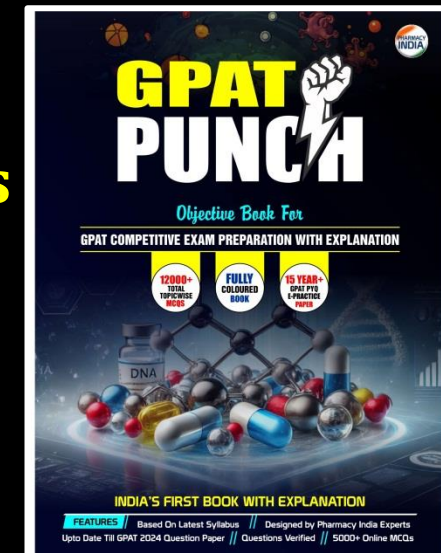


@PharmacyIndia



07. The phenomenon of increasing solubility of weak electrolytes and non-polar molecules by addition of water-miscible solvent is called: [GPAT – 2002, GPAT – 2021]

- (a) Complexation
- (b) Co-solvency
- (c) Solubilization
- (d) Hydrotropy



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia



07.

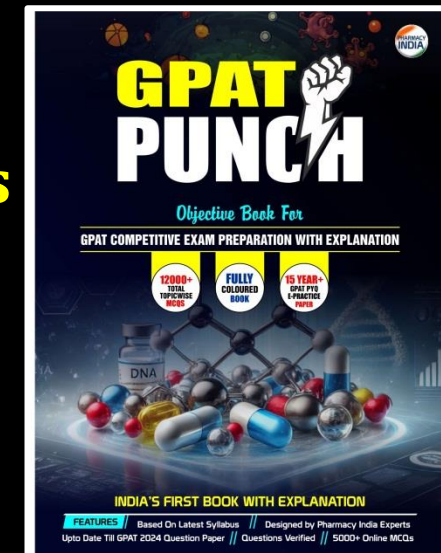
The phenomenon of increasing solubility of weak electrolytes and non-polar molecules by addition of water-miscible solvent is called: [GPAT – 2002, GPAT – 2021]

(a) Complexation

(b) Co-solvency

(c) Solubilization

(d) Hydrotropy



Download Pharmacy India Mobile App from Playstore

CO-SOLVENCY



Co-solvency increases solubility using water-miscible solvents.



Useful for weak electrolytes and non-polar drugs.



Common co-solvents: alcohol, glycerin, propylene glycol.



Co-solvents reduce the polarity of the aqueous vehicle.

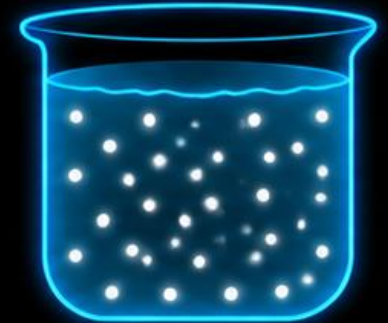
BEFORE
(WATER ONLY)



LOW SOLUBILITY

→
ADD
CO-SOLVENTS

AFTER
(WITH CO-SOLVENTS)



HIGH SOLUBILITY

COMMON CO-SOLVENTS



ALCOHOL



GLYCERIN



PROPYLENE
GLYCOL



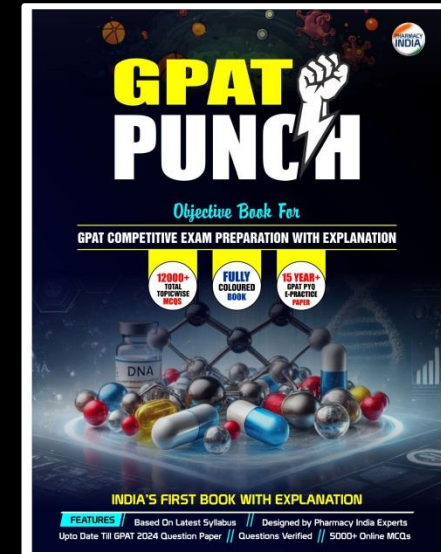
CO-SOLVENTS (WATER-MISCIBLE ORGANIC SOLVENTS) IMPROVE DRUG SOLUBILITY BY REDUCING POLARITY AND ENHANCING DISSOLUTION.



@PharmacyIndia

08. Increase in solubility of a drug in water in the presence of additives is known as: **[GPAT – 2015]**

- (a) Dissolution
- (b) Cosolvency
- (c) Solubilization
- (d) Hydrotrophy



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia



08.

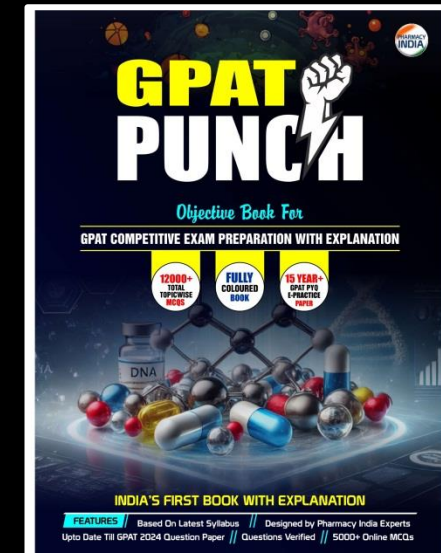
Increase in solubility of a drug in water in the presence of additives is known as: [GPAT – 2015]

(a) Dissolution

(b) Cosolvency

(c) Solubilization

(d) Hydrotrophy



Download Pharmacy India Mobile App from Playstore

SOLUBILIZATION

Increasing the apparent solubility of a **poorly soluble drug** in water with the help of additives.



Solubilization increases **apparent solubility** in water.



Important for **pharmaceutical solutions**.



Additives may include **surfactants**, **co-solvents**, or **hydrotropes**.



Hydrotropy and **co-solvency** are specific methods of solubilization.

POORLY SOLUBLE DRUG



Poorly soluble drug in water

ADD ADDITIVES
(Surfactants /
Co-solvents /
Hydrotropes)



Additives help wet, disperse and interact with drug particles

SOLUBILIZED DRUG
(Dispersed /
Dissolved in Water)



Drug solubilized in water

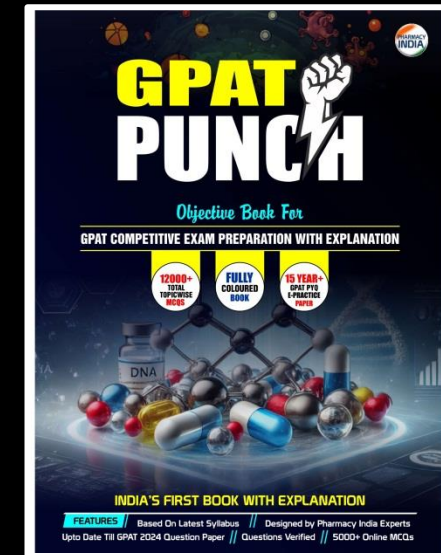
RESULT: INCREASED APPARENT SOLUBILITY → BETTER FORMULATION PERFORMANCE



@PharmacyIndia

09. One of the following is used as a solubilizing agent to solubilize testosterone in pharmaceutical liquid dosage forms: [GATE – 2004]

- (a) Sucrose monoesters
- (b) Lanolin esters
- (c) Lanolin ethers
- (d) Tween



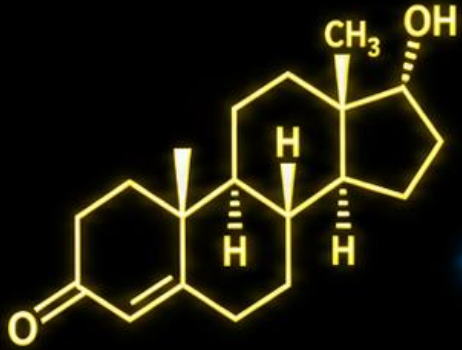
Download Pharmacy India Mobile App from Playstore

TWEEN SOLUBILIZES TESTOSTERONE

9

TESTOSTERONE

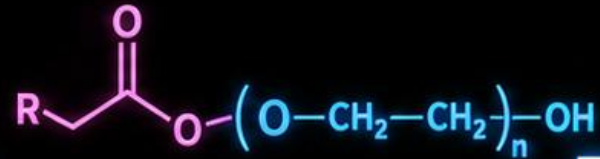
Poorly soluble in water



Aggregates in water

TWEEN (Polysorbate)

Non-ionic surfactant

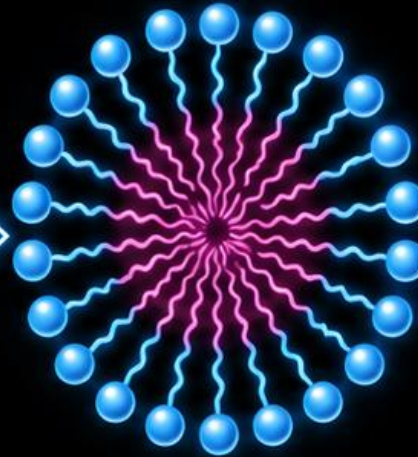


Hydrophobic
(fatty acid chain)

Hydrophilic
(polyoxyethylene chain)

MICELLE FORMATION

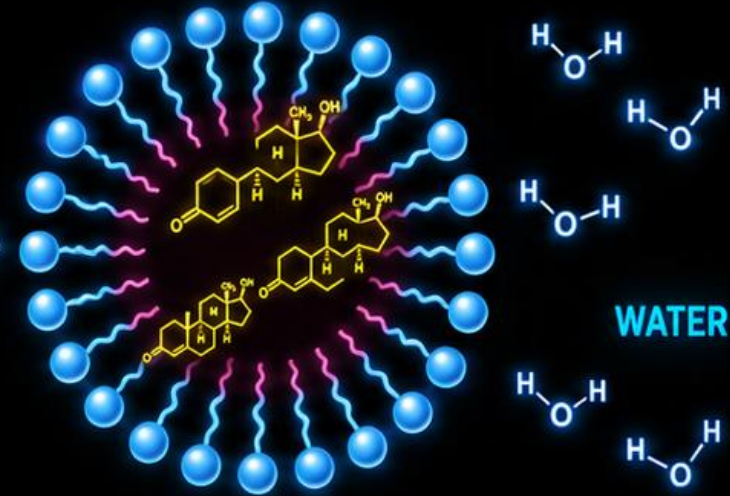
In aqueous medium



Micelle

TESTOSTERONE SOLUBILIZED

Inside micelle core



Lipophilic drug
solubilized in micelle



1. Testosterone is poorly soluble in water.



2. Tween is a non-ionic surfactant.



3. It forms micelles in aqueous medium.



4. Micelles can solubilize lipophilic drugs.



5. Tween is widely used in liquid formulations.



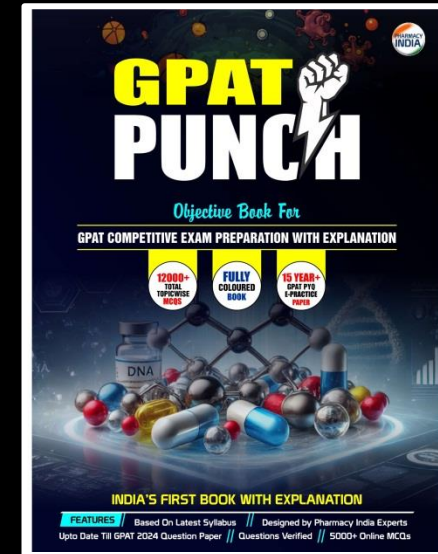
@PharmacyIndia



10.

The rate of drug bioavailability is most rapid when the drug is formulated as a: [GATE – 2001]

- (a) Controlled release product
- (b) Hard gelatin capsule
- (c) Tablet
- (d) Solution



Download Pharmacy India Mobile App from Playstore



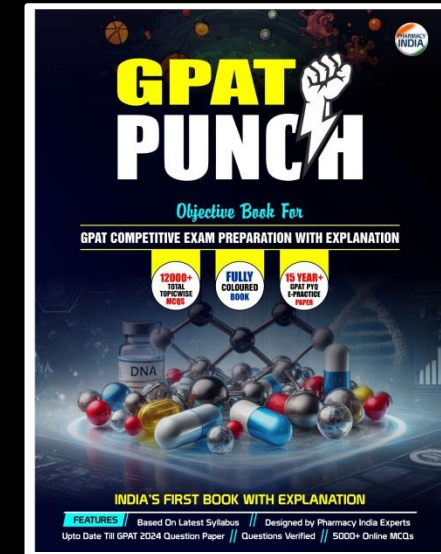
@PharmacyIndia



10.

The rate of drug bioavailability is most rapid when the drug is formulated as a: [GATE – 2001]

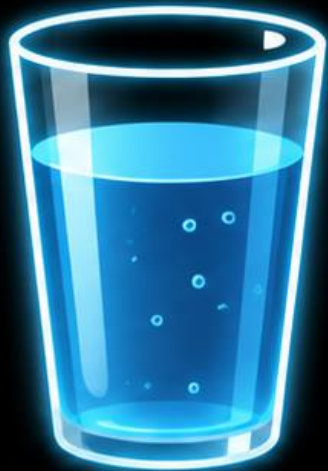
- (a) Controlled release product
- (b) Hard gelatin capsule
- (c) Tablet
- (d) Solution



Download Pharmacy India Mobile App from Playstore

SOLUTION = FASTEST BIOAVAILABILITY

10



SOLUTION

- ✓ Drug is already dissolved.
- ✓ No disintegration step is required.
- ✓ No dissolution step is required before absorption.
- ✓ Faster onset than tablets or capsules.



FASTEST
BIOAVAILABILITY

SOLUTION



FASTEST

CAPSULE



FASTER

TABLET



SLOWER

CONTROLLED-RELEASE



SLOWEST



CONTROLLED-RELEASE PRODUCTS RELEASE DRUG SLOWLY
Designed for extended effect and longer duration.



@PharmacyIndia

11.

The labelling instruction “To be diluted 20 times its volume with water” indicates the dispensed product is

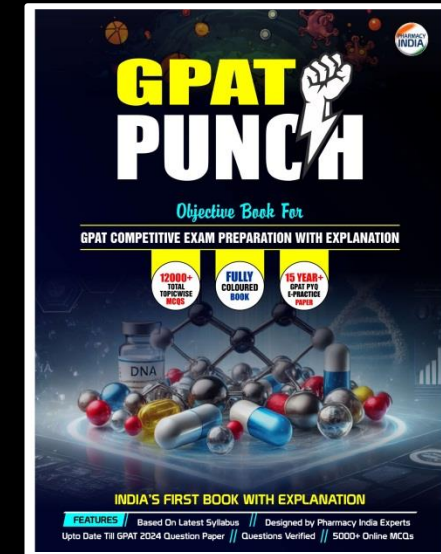
a: [GPAT – 2017]

(a) Mixture

(b) Elixir

(c) Linctus

(d) Mouthwash



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia



11.

The labelling instruction “To be diluted 20 times its volume with water” indicates the dispensed product is

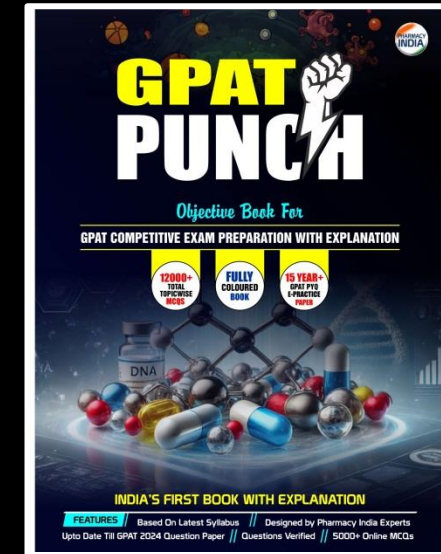
a: [GPAT – 2017]

(a) Mixture

(b) Elixir

(c) Linctus

(d) Mouthwash



Download Pharmacy India Mobile App from Playstore

MOUTHWASH: DILUTE BEFORE USE



Often supplied as
a **concentrate**.



Dilute about **20 times**
with **water** before use.



Used for **local action**
in the **oral cavity**.



Dilution **reduces irritation**
and **adjusts strength**.

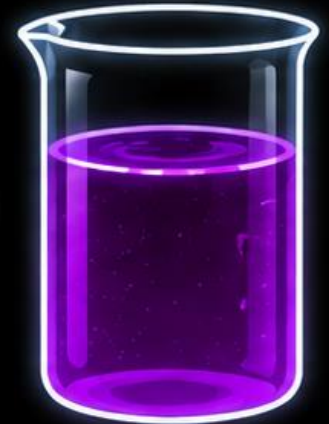


CONCENTRATE

+



WATER
(About 20 parts)



DILUTED MOUTHWASH
(About 1 part)



Dilute before use for **safer, effective**
local action and **better patient comfort**.



@PharmacyIndia

12.

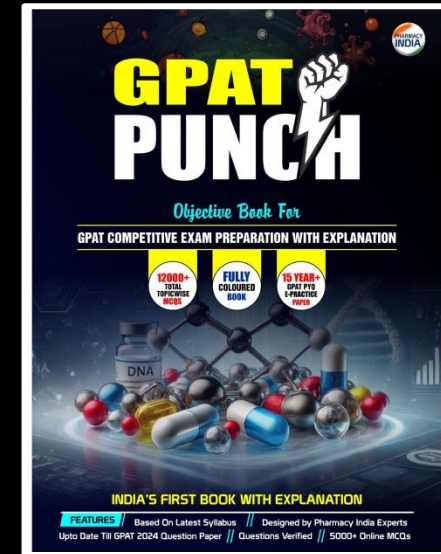
Lugol's solution contains 5% iodine. How much Lugol's solution is administered thrice daily to provide 60 mg iodine daily? [GATE - 1992]

(a) 0.2 mL

(b) 0.3 mL

(c) 0.4 mL

(d) 0.5 mL



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia

12.

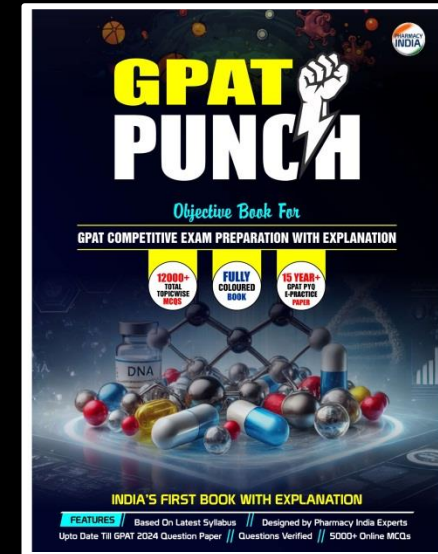
Lugol's solution contains 5% iodine. How much Lugol's solution is administered thrice daily to provide 60 mg iodine daily? [GATE – 1992]

(a) 0.2 mL

(b) 0.3 mL

(c) 0.4 mL

(d) 0.5 mL



Download Pharmacy India Mobile App from Playstore

LUGOL'S SOLUTION DOSING



5% iodine =
5 g per 100 mL



1 mL contains
50 mg iodine



Daily requirement =
60 mg in 3 doses



Each dose
needs 20 mg



Required volume
per dose = 0.4 mL

CALCULATION

5 g iodine per 100 mL
= 5000 mg per 100 mL



5000 mg ÷ 100 mL
= 50 mg per 1 mL



Each dose needs 20 mg



Required volume per dose
= 20 mg ÷ 50 mg/mL
= 0.4 mL



Measure carefully. Use a dropper marked in mL.

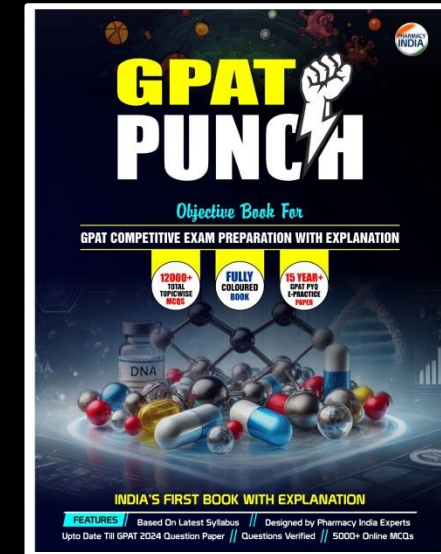


@PharmacyIndia

13. The concentration of sucrose in simple syrup BP is:

[GPAT – 1989]

- (a) 85% w/w
- (b) 60.70% w/w
- (c) 66.70% w/w
- (d) 40.74% w/w



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia



13. The concentration of sucrose in simple syrup BP is:

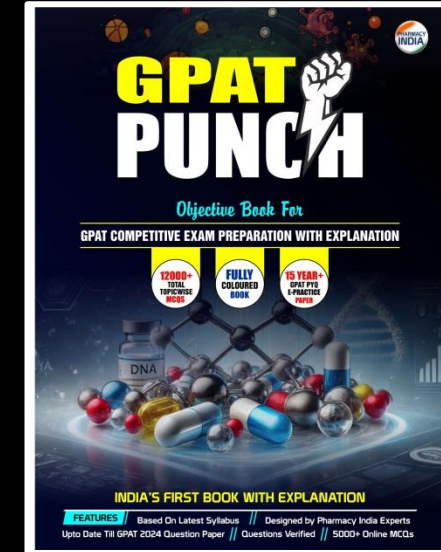
[GPAT – 1989]

(a) 85% w/w

(b) 60.70% w/w

(c) 66.70% w/w

(d) 40.74% w/w



Download Pharmacy India Mobile App from Playstore

SIMPLE SYRUP BP



Concentrated sucrose solution



Contains about 66.7% w/w sucrose



Provides sweetness



Increases viscosity



Helps resist microbial growth

TYPICAL STRENGTH (BP)
66.7% w/w SUCROSE
(Approximately two parts sucrose
to one part purified water)



2 PARTS

:



1 PART



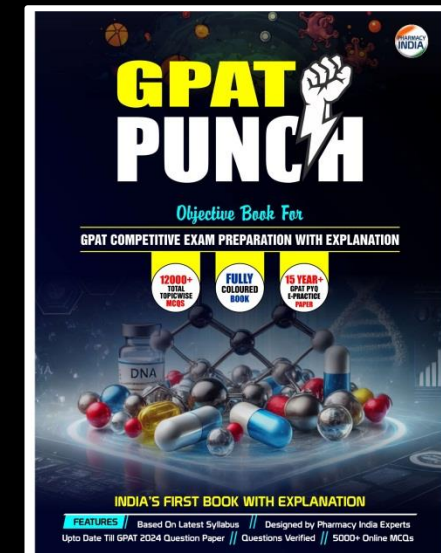
@PharmacyIndia



14.

Match the following solubility terms with parts of solvent required: [GPAT – 2013]

1. Very soluble	[P] 10–30
2. Sparingly soluble	[Q] 100–1000
3. Soluble	[R] Less than 1
4. Slightly soluble	[S] 30–100



(a) 1-Q, 2-R, 3-P, 4-S

(b) 1-P, 2-Q, 3-R, 4-S

(c) 1-S, 2-R, 3-Q, 4-P

(d) 1-R, 2-S, 3-P, 4-Q



Download Pharmacy India Mobile App from Playstore



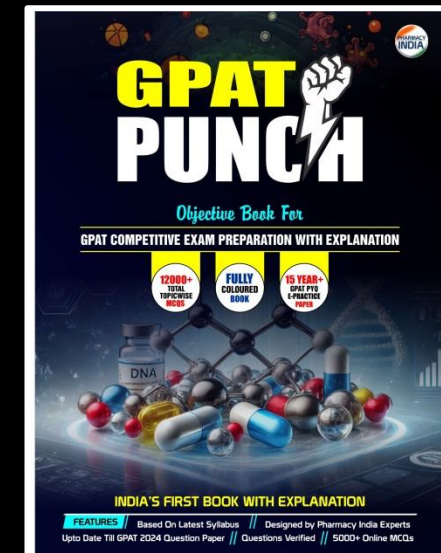
@PharmacyIndia



14.

Match the following solubility terms with parts of solvent required: [GPAT – 2013]

1. Very soluble	[P] 10–30
2. Sparingly soluble	[Q] 100–1000
3. Soluble	[R] Less than 1
4. Slightly soluble	[S] 30–100



(a) 1-Q, 2-R, 3-P, 4-S

(b) 1-P, 2-Q, 3-R, 4-S

(c) 1-S, 2-R, 3-Q, 4-P

(d) 1-R, 2-S, 3-P, 4-Q



Download Pharmacy India Mobile App from Playstore

OFFICIAL SOLUBILITY TERMS



VERY SOLUBLE

=

LESS THAN **1** PART SOLVENT



SOLUBLE

=

10–30 PARTS



SPARINGLY SOLUBLE

=

30–100 PARTS



SLIGHTLY SOLUBLE

=

100–1000 PARTS



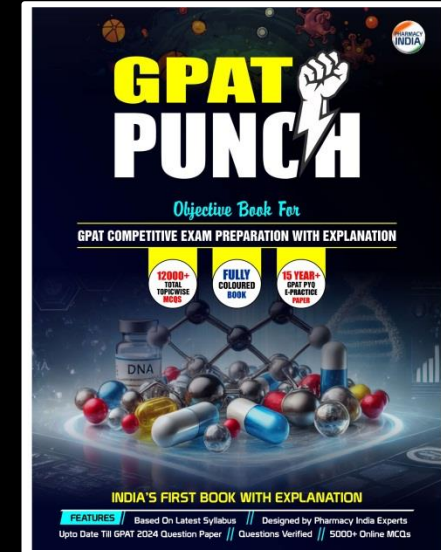
USED IN OFFICIAL MONOGRAPHS AND FORMULATION DECISIONS



@PharmacyIndia

15. Which formulation problem is most likely if a volatile oil-containing aromatic water is stored in a loosely closed container?

- (a) Increase in sweetness
- (b) Loss of volatile component and reduced flavor strength
- (c) Conversion into tincture
- (d) Formation of a suspension by polymerization



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia

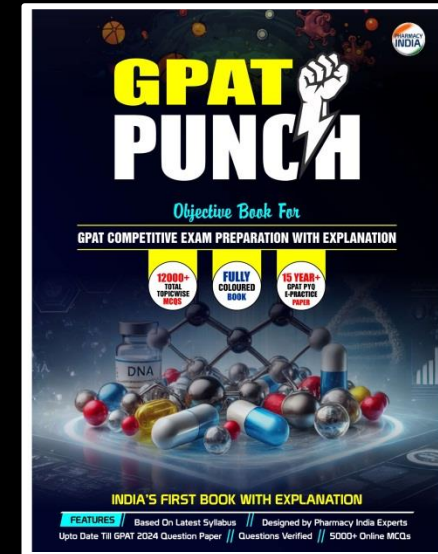
15. Which formulation problem is most likely if a volatile oil-containing aromatic water is stored in a loosely closed container?

(a) Increase in sweetness

(b) Loss of volatile component and reduced flavor strength

(c) Conversion into tincture

(d) Formation of a suspension by polymerization



Download Pharmacy India Mobile App from Playstore

AROMATIC WATERS **NEED** **TIGHT** STORAGE



Contain **volatile oils** or **volatile substances**.



Loose closure causes **evaporation**.



Loss of volatile oil **reduces odor and flavor strength**.



Store in **well-closed containers**.



Protects **stability** and **palatability**.

LOOSE CLOSURE

Aroma escapes →

Evaporation occurs →

Loss of volatile oil →



**REDUCED ODOR
& FLAVOR STRENGTH**

VS

TIGHT CLOSURE



← Aroma retained

← Stability protected



**FULL ODOR
& FLAVOR STRENGTH**



Well-closed storage keeps aromatic waters **fresh**, **potent**, and **effective**.



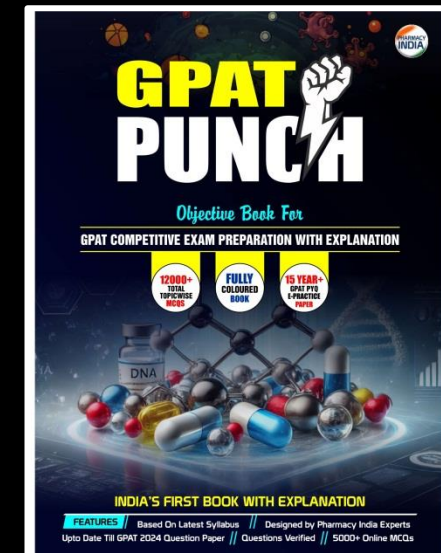
@PharmacyIndia



16.

Match the following types of water with their descriptions:

1. Purified Water	[P] Used for preparation of medicine where water of high biological quality is needed
2. Highly Purified Water	[Q] Water has been sterilized by heat
3. Water for Injections	[R] Non-sterile and pyrogenic
4. Sterilized Water for Injections	[S] Pyrogen-free



(a) 1-S, 2-R, 3-Q, 4-P

(b) 1-R, 2-P, 3-S, 4-Q

(c) 1-Q, 2-R, 3-S, 4-P

(d) 1-S, 2-Q, 3-P, 4-R



Download Pharmacy India Mobile App from Playstore



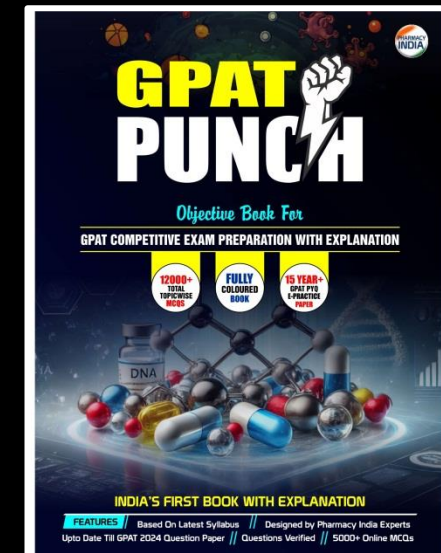
@PharmacyIndia



16.

Match the following types of water with their descriptions:

1. Purified Water	[P] Used for preparation of medicine where water of high biological quality is needed
2. Highly Purified Water	[Q] Water has been sterilized by heat
3. Water for Injections	[R] Non-sterile and pyrogenic
4. Sterilized Water for Injections	[S] Pyrogen-free



(a) 1-S, 2-R, 3-Q, 4-P

(b) 1-R, 2-P, 3-S, 4-Q

(c) 1-Q, 2-R, 3-S, 4-P

(d) 1-S, 2-Q, 3-P, 4-R



Download Pharmacy India Mobile App from Playstore

TYPES OF PHARMACEUTICAL WATER

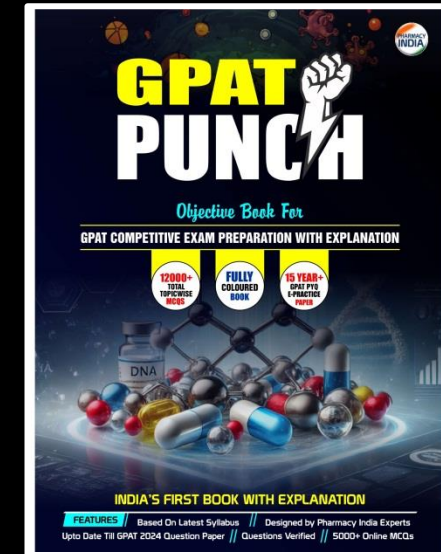
TYPE	KEY FEATURES	USED FOR
 PURIFIED WATER	 non-sterile and may be pyrogenic	 General laboratory use, manufacturing, non-parenteral products
 HIGHLY PURIFIED WATER	 used where high biological quality is needed	 Preparing parenteral products, final rinsing, dilution
 WATER FOR INJECTIONS	 pyrogen-free	 Formulation of parenteral products
 STERILIZED WATER FOR INJECTIONS	 sterilized by heat	 Parenteral products sensitive to heat



@PharmacyIndia

17. Saturated aqueous solutions of volatile oils or volatile substances are called:

- (a) Elixirs
- (b) Aromatic waters
- (c) Syrups
- (d) Spirits



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia

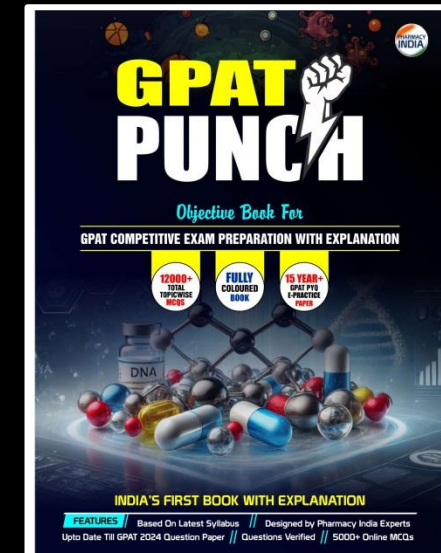
17. Saturated aqueous solutions of volatile oils or volatile substances are called:

(a) Elixirs

(b) Aromatic waters

(c) Syrups

(d) Spirits



Download Pharmacy India Mobile App from Playstore

AROMATIC WATERS



Saturated aqueous solutions



Contain **volatile oils** or aromatic substances



Clear preparations



Mainly used as **flavoring vehicles**



Contain **little or no alcohol**

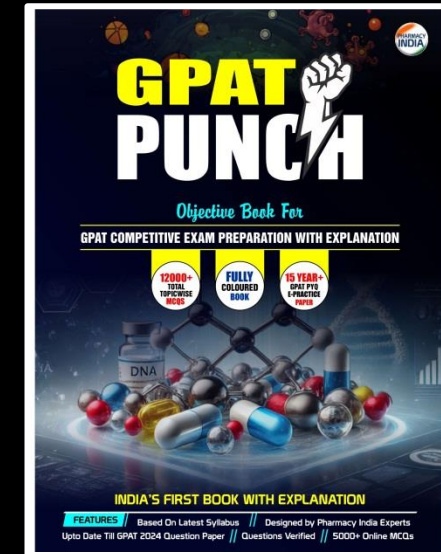




@PharmacyIndia

18. Alcoholic or hydroalcoholic solutions of volatile substances used as flavoring agents are:

- (a) Spirits
- (b) Elixirs
- (c) Tinctures
- (d) Aromatic waters



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia



18.

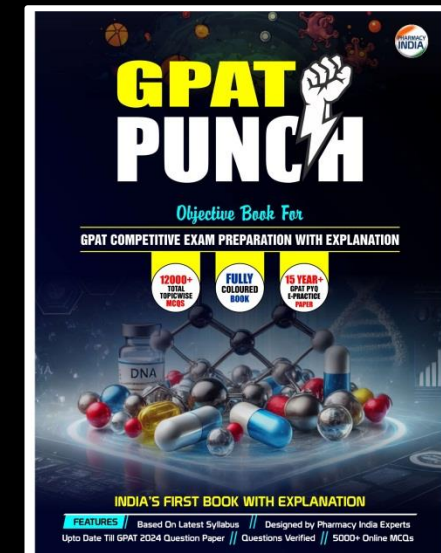
Alcoholic or hydroalcoholic solutions of volatile substances used as flavoring agents are:

(a) Spirits

(b) Elixirs

(c) Tinctures

(d) Aromatic waters



Download Pharmacy India Mobile App from Playstore

SPIRITS



Alcoholic or **hydroalcoholic** solutions



Contain **volatile** substances



Used as **flavoring agents**



Alcohol helps **dissolve volatile oils**



Different from **aromatic waters**, which are **aqueous**



19.

Which is NOT an advantage of pharmaceutical solutions?

- (a) Drug action can be rapid
- (b) Solutions provide dose uniformity
- (c) Capable for very prolonged storage
- (d) Oral solutions are easily swallowed



Download Pharmacy India Mobile App from Playstore



19.

Which is NOT an advantage of pharmaceutical solutions?

(a) Drug action can be rapid

(b) Solutions provide dose uniformity

(c) Capable for very prolonged storage

(d) Oral solutions are easily swallowed



Download Pharmacy India Mobile App from Playstore

SOLUTIONS: MAIN LIMITATION



Rapid
drug availability



Dose
uniformity



Easy
to swallow



Not ideal for
very prolonged
storage



Dissolved drugs
may degrade
faster



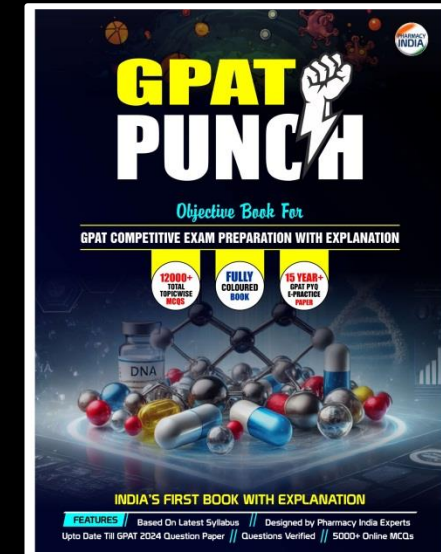
More prone to
microbial
growth



@PharmacyIndia

20. Solubilizers that solubilize essential oils include:

- (a) Polyoxyethylene sorbitan fatty acid esters
- (b) Polyoxyethylene monoalkyl ethers
- (c) Lanolin esters and ethers
- (d) Both (a) and (b)



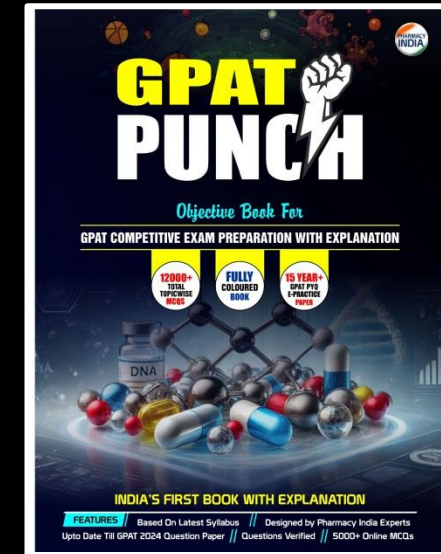
Download Pharmacy India Mobile App from Playstore



@PharmacyIndia

20. Solubilizers that solubilize essential oils include:

- (a) Polyoxyethylene sorbitan fatty acid esters
- (b) Polyoxyethylene monoalkyl ethers
- (c) Lanolin esters and ethers
- (d) Both (a) and (b)



Download Pharmacy India Mobile App from Playstore

ESSENTIAL OIL SOLUBILIZERS



Essential oils are poorly soluble in water.



Surfactants improve solubility.



Tweens = polyoxyethylene sorbitan fatty acid esters.



Brij-type agents = polyoxyethylene monoalkyl ethers.



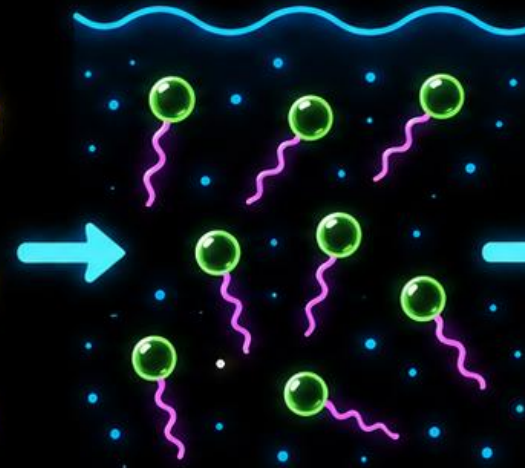
These form micelles in water.

ESSENTIAL OIL DROPLETS



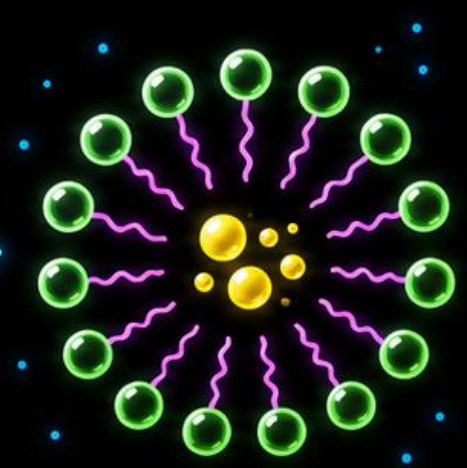
Oil droplets do not mix with water

SURFACTANT IN WATER



Surfactant molecules disperse in water

MICELLE FORMATION (SOLUBILIZED OIL)



Micelles trap oil in the core and make it soluble



Essential oil



Hydrophilic head (water-loving)



Hydrophobic tail (oil-loving)



Water



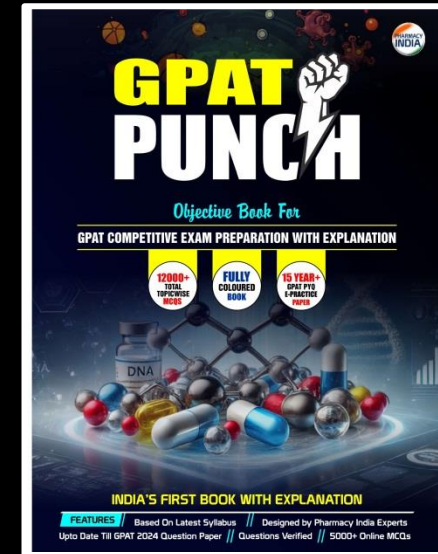
@PharmacyIndia



21.

Salicylic acid collodion is used as:

- (a) Keratolytic agent
- (b) Useful in massage
- (c) Treatment of cough
- (d) Emollient



Download Pharmacy India Mobile App from Playstore

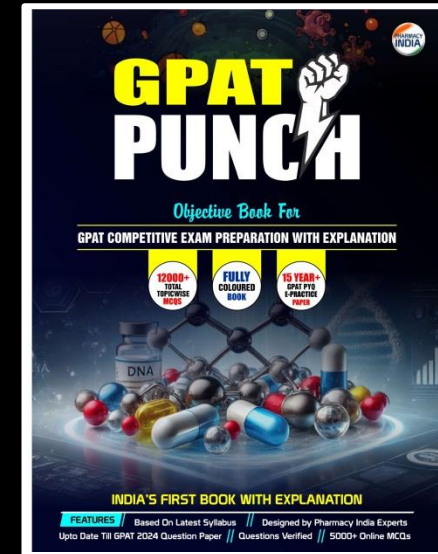


@PharmacyIndia

21.

Salicylic acid collodion is used as:

- (a) Keratolytic agent**
- (b) Useful in massage**
- (c) Treatment of cough**
- (d) Emollient**



Download Pharmacy India Mobile App from Playstore

SALICYLIC ACID COLLODION



CORN / CALLUS / WART



Contains **salicylic acid** in **collodion base** for effective local **keratolytic** action.



Keratolytic agent



Softens keratinized tissue



Helps remove
corns, calluses & warts



Collodion forms
a **protective film**



Keeps drug **in contact**
with lesion



For **local skin use only**



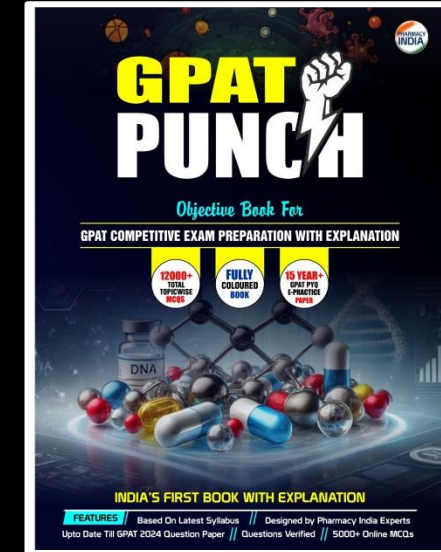
@PharmacyIndia



22.

Simple syrup is a saturated solution of:

- (a) Sucrose
- (b) Fructose
- (c) Dextrose
- (d) None of these



Download Pharmacy India Mobile App from Playstore



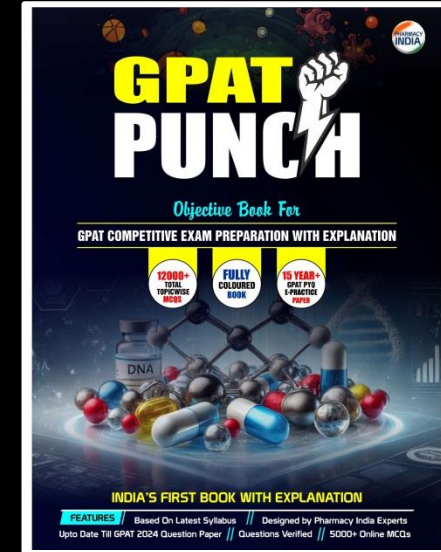
@PharmacyIndia



22.

Simple syrup is a saturated solution of:

- (a) Sucrose
- (b) Fructose
- (c) Dextrose
- (d) None of these



Download Pharmacy India Mobile App from Playstore

SIMPLE SYRUP



COMPOSITION

Sucrose + Water
(Saturated solution)



Simple syrup =
saturated sucrose solution.



Sucrose acts as
sweetening agent.



Increases viscosity.



Helps preservation.



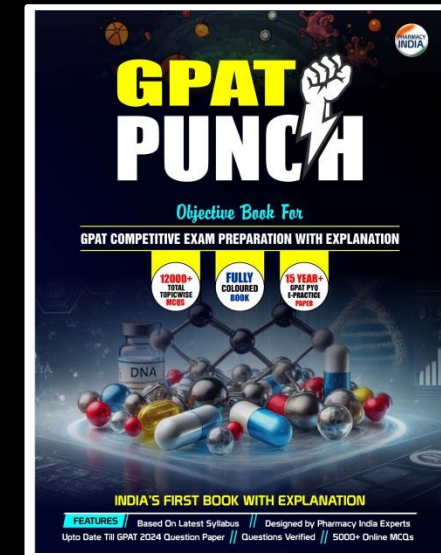
Common vehicle for
medicated syrups.



@PharmacyIndia

23. Given the following, all are monophasic liquid dosage forms except:

- (a) Draughts
- (b) Tinctures
- (c) Spirits
- (d) Enema



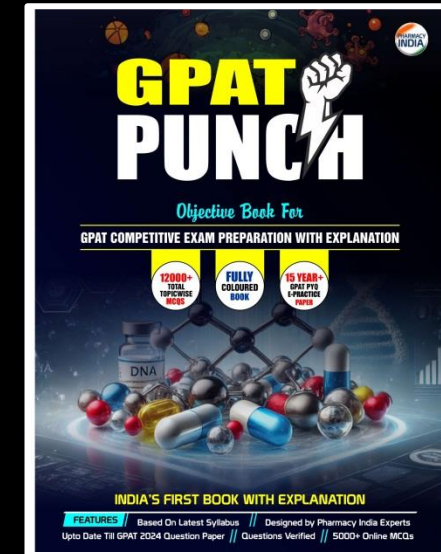
Download Pharmacy India Mobile App from Playstore



@PharmacyIndia

23. Given the following, all are monophasic liquid dosage forms except:

- (a) Draughts
- (b) Tinctures
- (c) Spirits
- (d) Enema



Download Pharmacy India Mobile App from Playstore

MONOPHASIC LIQUID DOSAGE FORMS

MONOPHASIC ORAL LIQUIDS

DRAUGHT



Draught =
oral liquid

TINCTURE



Tincture =
alcoholic /
hydroalcoholic solution

SPIRIT



Spirit =
volatile substance
solution

RECTAL PREPARATION

ENEMA



Enema = rectal
preparation



Not classically grouped
with oral monophasic liquids.



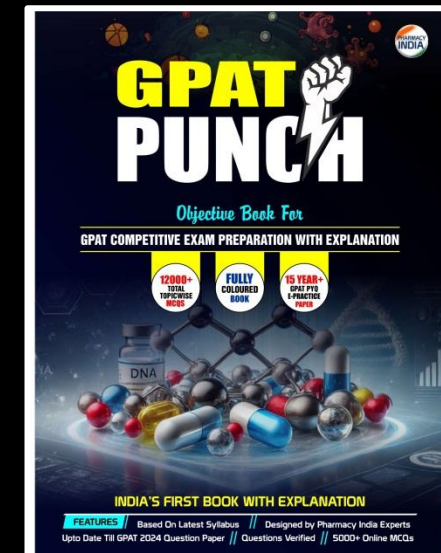
@PharmacyIndia



24.

The solubility of caffeine is increased appreciably by a large concentration of sodium benzoate. This is a classical example of:

- (a) Solubilization
- (b) Complexation
- (c) Hydrotrophy
- (d) Cosolvency



Download Pharmacy India Mobile App from Playstore

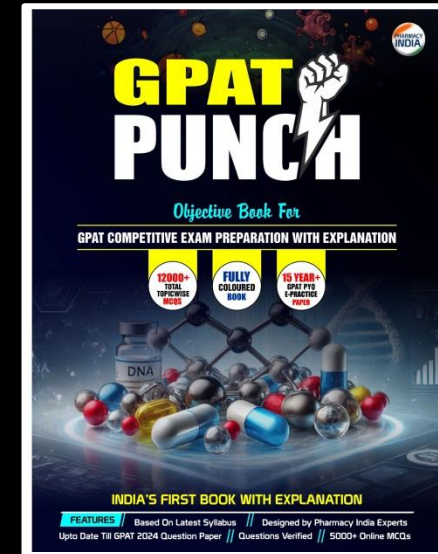


@PharmacyIndia

24.

The solubility of caffeine is increased appreciably by a large concentration of sodium benzoate. This is a classical example of:

- (a) Solubilization
- (b) Complexation
- (c) **Hydrotropy**
- (d) Cosolvency



Download Pharmacy India Mobile App from Playstore

HYDROTROPY: CAFFEINE & SODIUM BENZOATE



Hydrotropy improves aqueous solubility.



Uses high concentration of hydrotropic agent.



Sodium benzoate is a hydrotrope.

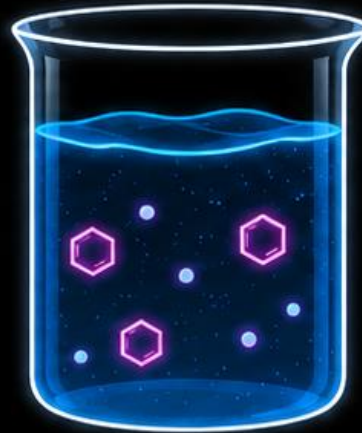


Increases caffeine solubility.



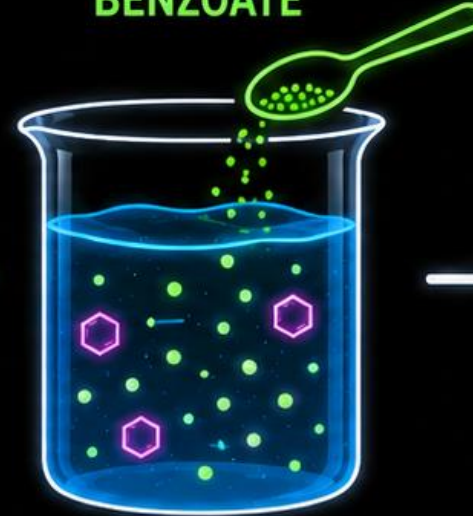
Not mainly due to micelle formation.

1. CAFFEINE
IN WATER



⬡ = Caffeine
• = Water

2. ADD SODIUM
BENZOATE



● = Sodium benzoate
(Hydrotropic agent)

3. IMPROVED
SOLUBILITY



More caffeine
dissolved



Hydrotropy enhances solubility by altering water structure and reducing solute aggregation.



@PharmacyIndia

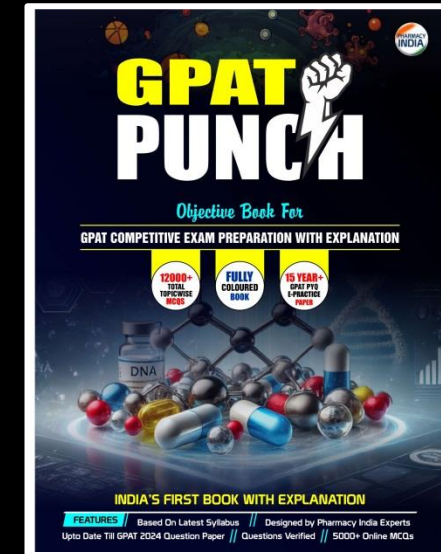
25. According to USP, the concentration of sucrose in Simple Syrup is:

(a) 66.67% w/w

(b) 75% w/v

(c) 80% w/w

(d) 85% w/v



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia

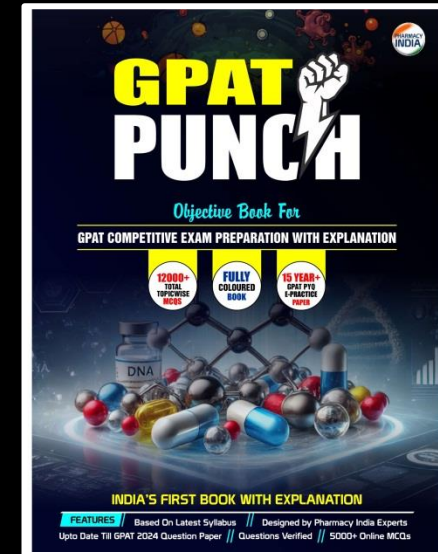
25. According to USP, the concentration of sucrose in Simple Syrup is:

(a) 66.67% w/w

(b) 75% w/v

(c) 80% w/w

(d) 85% w/v



Download Pharmacy India Mobile App from Playstore

USP SIMPLE SYRUP



USP Simple Syrup =
85% w/v sucrose



85 g sucrose in 100 mL



Provides sweetness



Adds viscosity



Self-preserving
at proper strength



IP/BP often expressed as 66.7% w/w

ARJUNA SERIES

GPAT 2027 - 28

ADMISSION OPEN



400+ Live Classes



DPP After Topic Completion



700+ Pre-Recorded Lectures



GPAT Syllabus Completion



4-7 Live Classes Weekly



400+ Online Test Series



25,000+ Questions for Practice



Weekend Surprise Test



Weekend Doubt Session



Previous Year & Model Paper Discussion



Digital Library



**DOWNLOAD PHARMACY INDIA
APP FROM PLAY STORE**



6396274917

6395596959

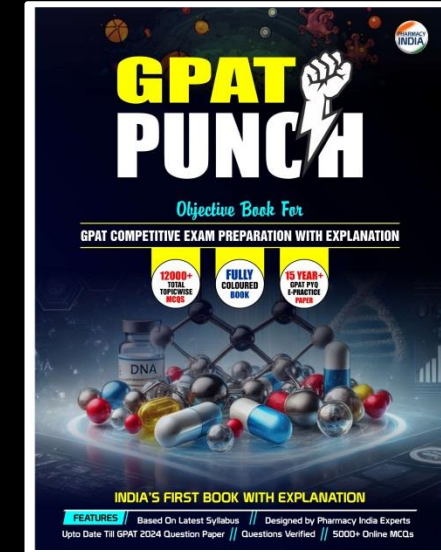


@PharmacyIndia



26. The specific density of IP-grade Simple Syrup is approximately:

- (a) 1.113
- (b) 1.213
- (c) 1.313
- (d) 1.413



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia

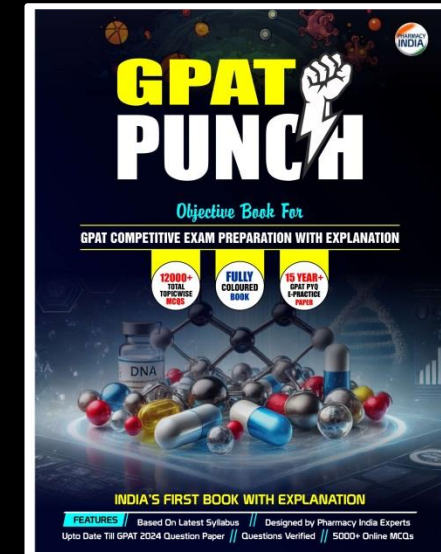
26. The specific density of IP-grade Simple Syrup is approximately:

(a) 1.113

(b) 1.213

(c) 1.313

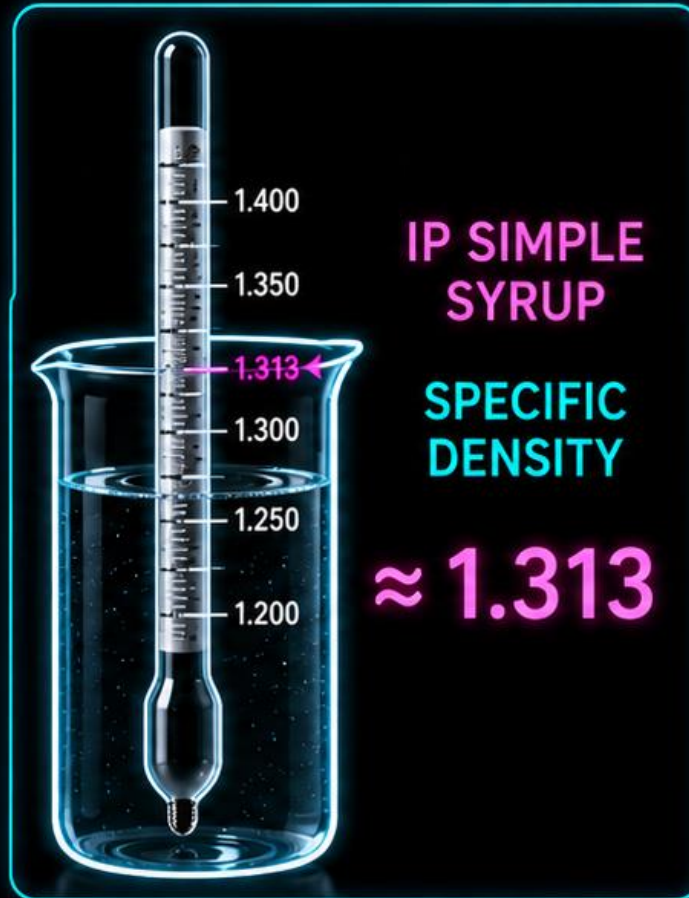
(d) 1.413



Download Pharmacy India Mobile App from Playstore

IP-GRADE SIMPLE SYRUP

SPECIFIC DENSITY



IP Simple Syrup
specific density ≈ 1.313



High sucrose concentration
increases density



Density helps check
correct syrup strength



Density is linked with
sugar concentration

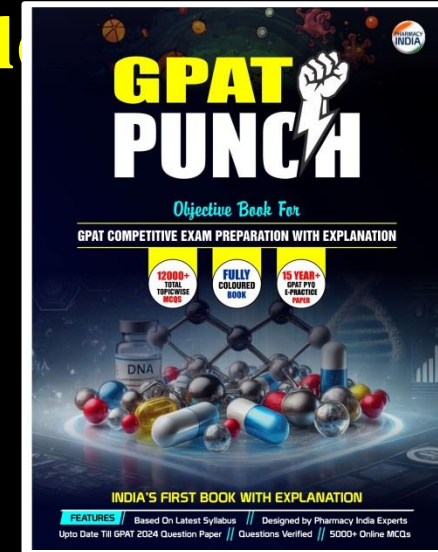


@PharmacyIndia

27.

A liquid oral preparation intended to be taken as a single dose, usually about 50 mL, is called a:

- (a) Draught
- (b) Elixir
- (c) Linctus
- (d) Spirit



Download Pharmacy India Mobile App from Playstore

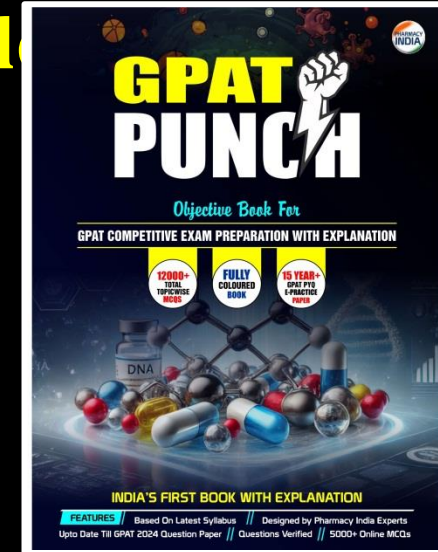


@PharmacyIndia

27.

A liquid oral preparation intended to be taken as a single dose, usually about 50 mL, is called a:

- (a) Draught
- (b) Elixir
- (c) Linctus
- (d) Spirit



Download Pharmacy India Mobile App from Playstore

DRAUGHT



Draught = liquid oral dosage form.



Single dose preparation.



Usual volume
≈ **50 mL**.



Contains dissolved
medicinal substance.



Taken at **one time**.



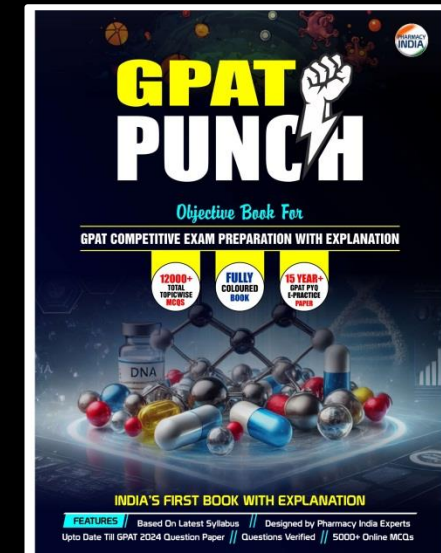


@PharmacyIndia



28. Which viscous oral preparation is designed to be sipped and swallowed slowly without water for cough relief?

- (a) Elixir
- (b) Linctus
- (c) Syrup
- (d) Gargle



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia



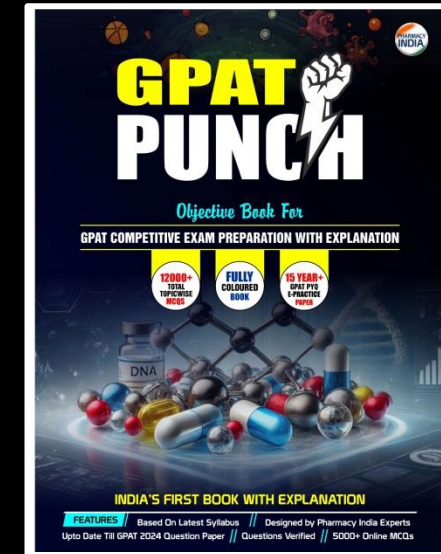
28. Which viscous oral preparation is designed to be sipped and swallowed slowly without water for cough relief?

(a) Elixir

(b) Linctus

(c) Syrup

(d) Gargle



Download Pharmacy India Mobile App from Playstore

LINCTUS



Linctus = cough preparation



Viscous and sweet



Swallow **slowly**



Usually taken **without water**



Prolongs throat contact



Soothing / demulcent effect



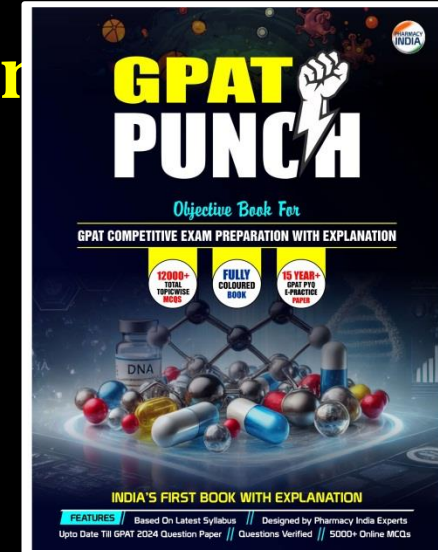
@PharmacyIndia



29.

Which pharmaceutical preparation is applied to the skin by friction and rubbing?

- (a) Lotion
- (b) Liniment
- (c) Collodion
- (d) Paint



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia



29.

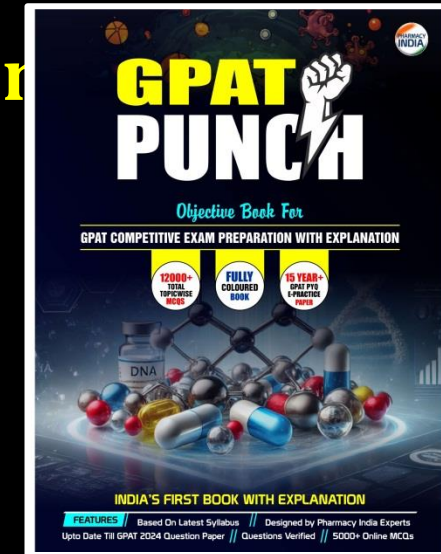
Which pharmaceutical preparation is applied to the skin by friction and rubbing?

(a) Lotion

(b) Liniment

(c) Collodion

(d) Paint



Download Pharmacy India Mobile App from Playstore

LINIMENT



Liniment = liquid /
semiliquid for **external use**.



Applied with
rubbing or friction.



May act as
counter-irritant or **analgesic**.



Do not apply on
broken skin.

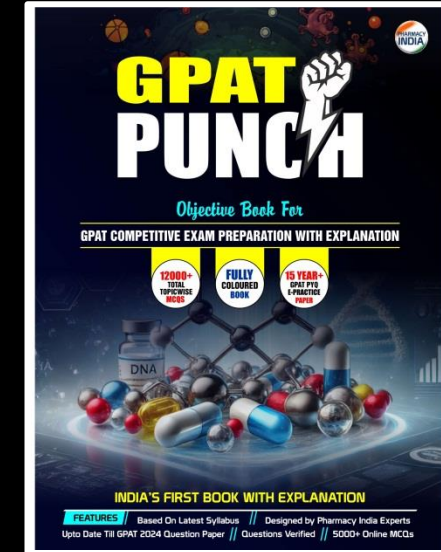




@PharmacyIndia

30. Flexible collodion contains which ingredient to provide flexibility?

- (a) Pyroxylin
- (b) Castor oil
- (c) Ethanol
- (d) Ether



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia

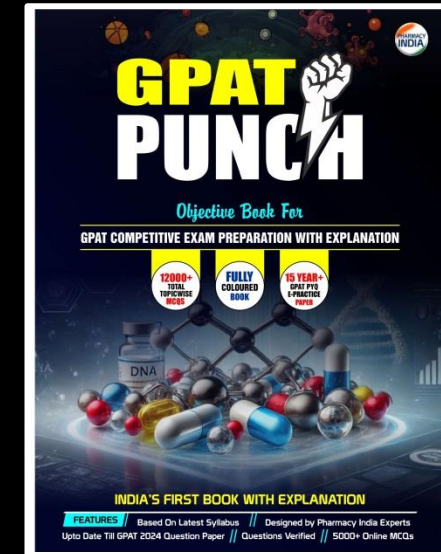
30. Flexible collodion contains which ingredient to provide flexibility?

(a) Pyroxylin

(b) Castor oil

(c) Ethanol

(d) Ether



Download Pharmacy India Mobile App from Playstore

FLEXIBLE COLLODION



Collodion contains
pyroxylin in ether + alcohol.



Plain collodion
forms a **hard film**.



Flexible collodion
contains **castor oil**.



Castor oil
acts as **plasticizer**.



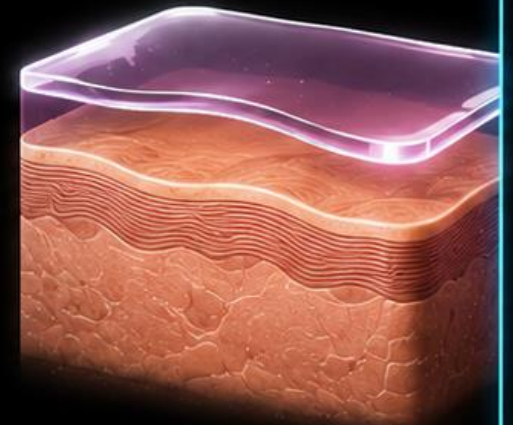
Prevents
cracking of the film.



+



CASTOR OIL
(Plasticizer)



SKIN
(Flexible film)

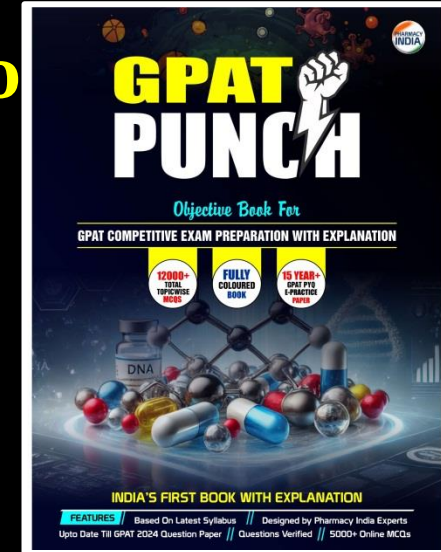


@PharmacyIndia

31.

A pharmaceutical buffer system with effective range around 4.0 to 8.0 is:

- (a) Boric acid buffer
- (b) Citric acid buffer
- (c) Phosphate buffer
- (d) Ammonium chloride buffer



Download Pharmacy India Mobile App from Playstore



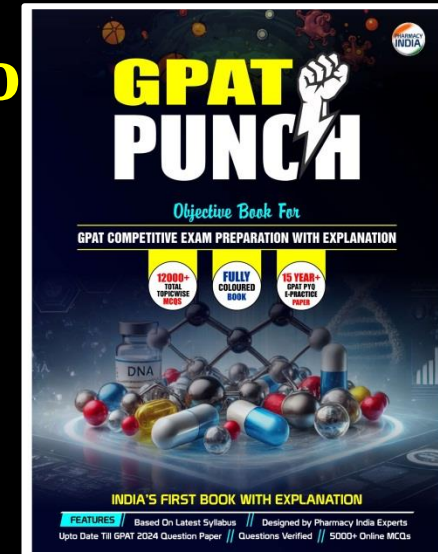
@PharmacyIndia



31.

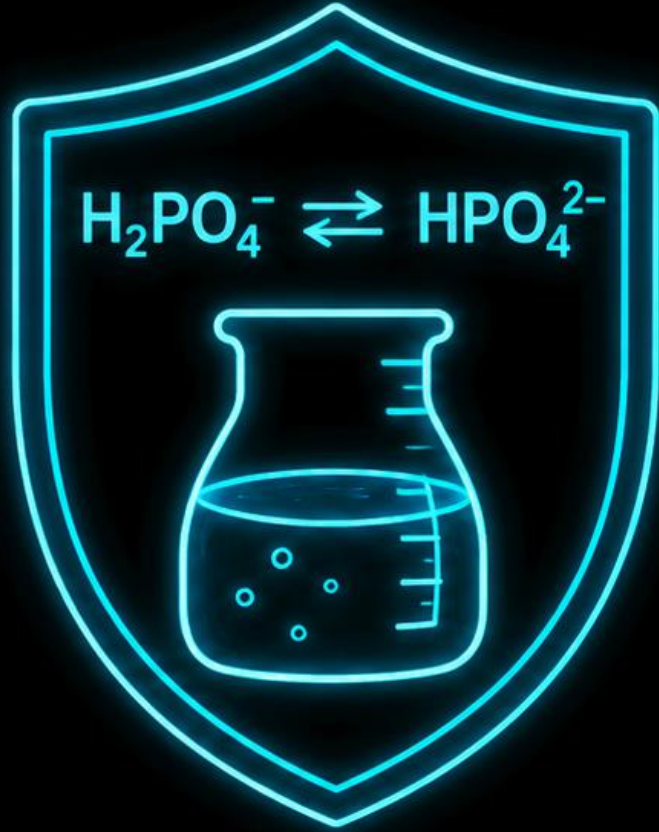
A pharmaceutical buffer system with effective range around 4.0 to 8.0 is:

- (a) Boric acid buffer
- (b) Citric acid buffer
- (c) Phosphate buffer
- (d) Ammonium chloride buffer

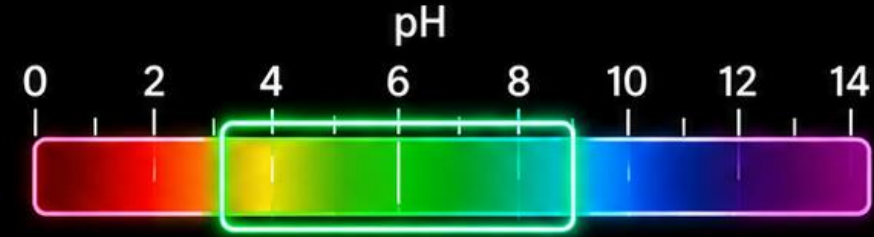


Download Pharmacy India Mobile App from Playstore

PHOSPHATE BUFFER



Effective range around
pH 4.0–8.0.



Maintains
formulation pH.



Useful in many
aqueous liquid dosage forms.



Near
physiological / neutral range.



Proper pH improves
stability and solubility.



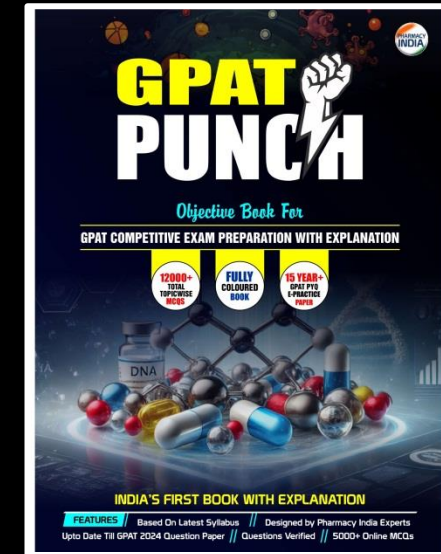


@PharmacyIndia



32. Benzalkonium chloride is categorized as what type of preservative?

- (a) Acidic preservative
- (b) Mercurial preservative
- (c) Quaternary ammonium compound
- (d) Neutral preservative



Download Pharmacy India Mobile App from Playstore

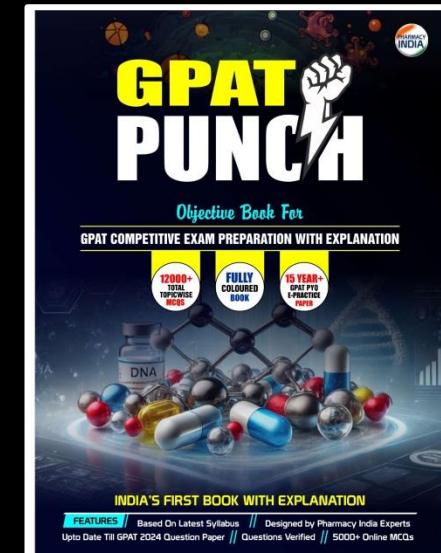


@PharmacyIndia



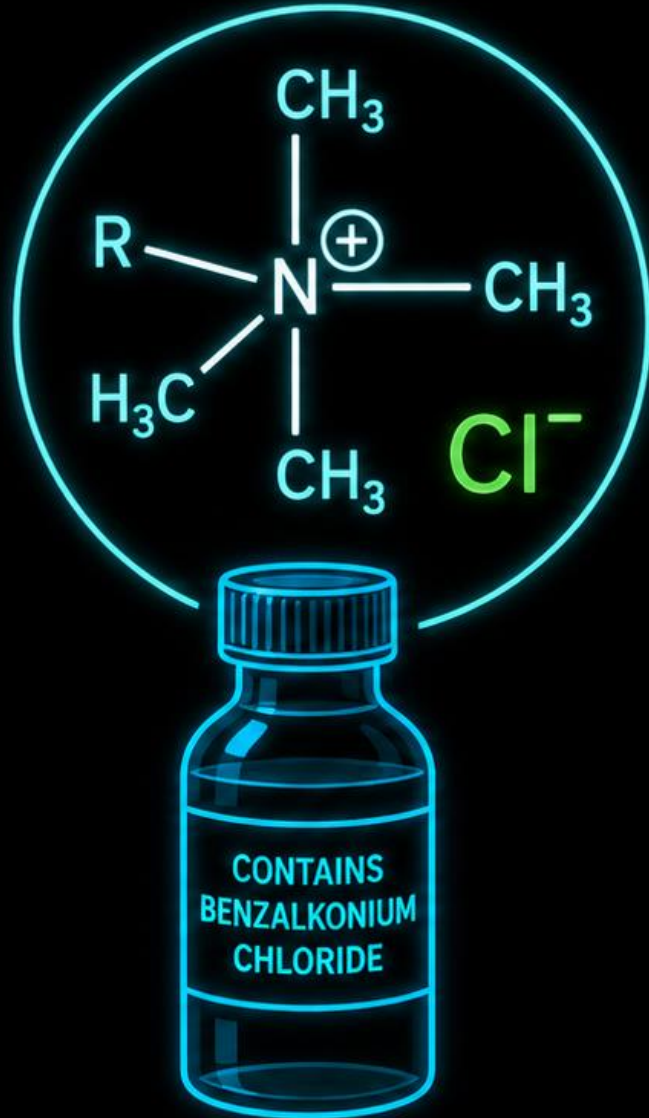
32. Benzalkonium chloride is categorized as what type of preservative?

- (a) Acidic preservative
- (b) Mercurial preservative
- (c) Quaternary ammonium compound
- (d) Neutral preservative



Download Pharmacy India Mobile App from Playstore

BENZALKONIUM CHLORIDE



+

CATIONIC PRESERVATIVE

Positively charged surfactant.

N⁺

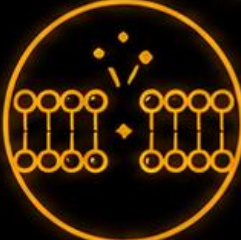
QUATERNARY AMMONIUM COMPOUND

Contains a quaternary ammonium group.



ANTIMICROBIAL ACTION

Broad-spectrum activity.



DISRUPTS MICROBIAL CELL MEMBRANES

Increases membrane permeability → leakage and cell death.



USED IN MANY PHARMACEUTICAL LIQUIDS

Eye drops, nasal sprays, mouthwashes, and topical solutions.



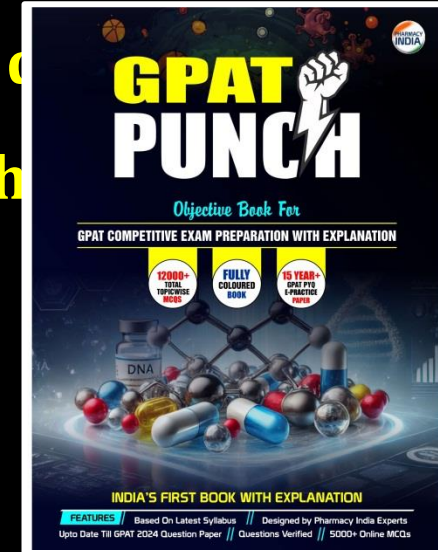
@PharmacyIndia



33.

During preparation of a medicated elixir, a water-insoluble drug is added to alcohol. After addition of aqueous syrup, a precipitate forms. What is the most likely reason?

- (a) Increase in alcohol concentration
- (b) Reduction of co-solvent concentration below required level
- (c) Increase in sucrose crystallization only
- (d) Formation of emulsion



Download Pharmacy India Mobile App from Playstore

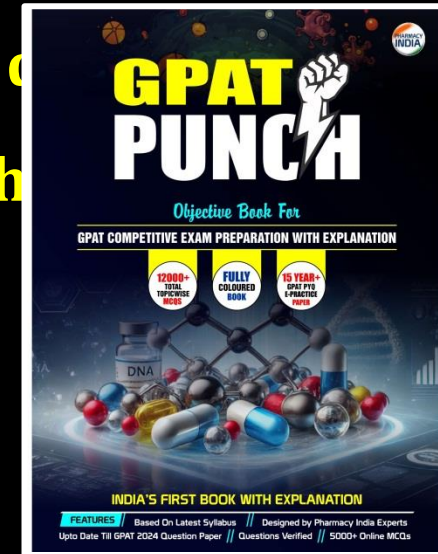


@PharmacyIndia

33.

During preparation of a medicated elixir, a water-insoluble drug is added to alcohol. The drug precipitates after addition of aqueous syrup. What is the most likely reason?

- (a) Increase in alcohol concentration
- (b) Reduction of co-solvent concentration below required level**
- (c) Increase in sucrose crystallization only
- (d) Formation of emulsion



Download Pharmacy India Mobile App from Playstore

WHY A MEDICATED ELIXIR MAY PRECIPITATE



Elixir =
hydroalcoholic monophasic liquid.



Alcohol
acts as **co-solvent**.



Adding **aqueous syrup**
dilutes alcohol.



Co-solvent concentration
falls below required level.



Poorly water-soluble drug
precipitates.



Maintain
proper **solvent ratio**.



**Alcoholic
solution**
(clear)

+



**Aqueous
syrup**
(dilutes alcohol)



**Precipitate
appears**
(poorly water-soluble
drug)



Maintain proper solvent ratio
to keep the elixir clear and stable.

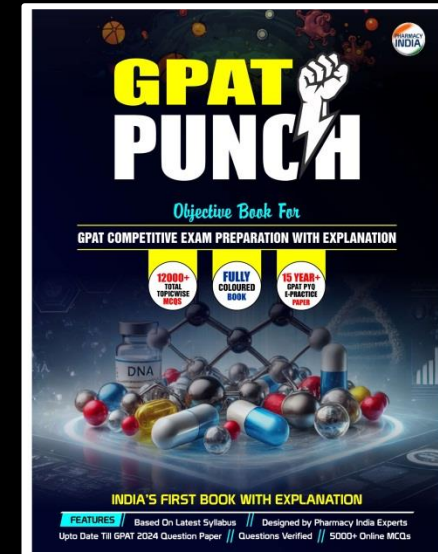


@PharmacyIndia

34.

A pharmacist advises a patient not to dilute a linctus before administration. What is the main reason?

- (a) Dilution increases alcohol toxicity
- (b) Dilution decreases viscosity and throat contact time
- (c) Dilution causes crystallization of sucrose immediately
- (d) Dilution converts linctus into an emulsion



Download Pharmacy India Mobile App from Playstore



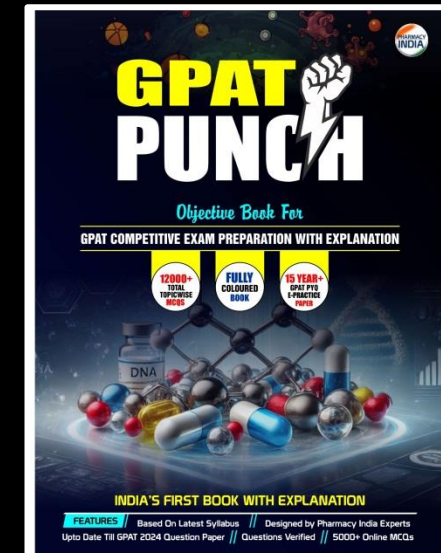
@PharmacyIndia



34.

A pharmacist advises a patient not to dilute a linctus before administration. What is the main reason?

- (a) Dilution increases alcohol toxicity
- (b) Dilution decreases viscosity and throat contact time**
- (c) Dilution causes crystallization of sucrose immediately
- (d) Dilution converts linctus into an emulsion



Download Pharmacy India Mobile App from Playstore

DO NOT DILUTE LINCTUS



Linctus =
viscous cough liquid



Swallow
slowly



High viscosity
prolongs
throat contact



Dilution reduces
viscosity



Less demulcent /
soothing action



Reduced throat
contact time



DON'T DILUTE

BEFORE (UNDILUTED)



AFTER (DILUTED)



HIGH VISCOSITY

LOW VISCOSITY





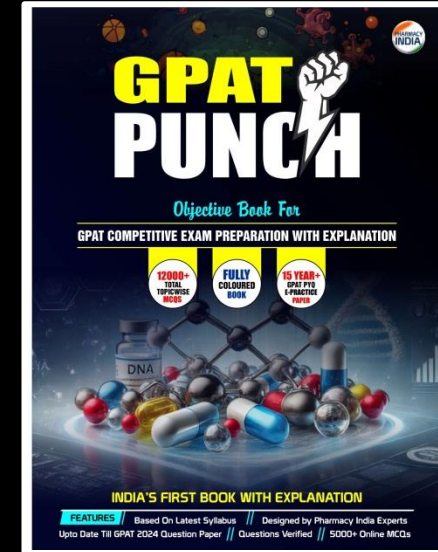
@PharmacyIndia



35.

Tinctures are defined as:

- (a) Aqueous solutions of inorganic salts
- (b) Alcoholic or hydroalcoholic solutions prepared from vegetable drugs or chemical substances
- (c) Viscous preparations for internal use
- (d) Saturated solutions of sucrose



Download Pharmacy India Mobile App from Playstore



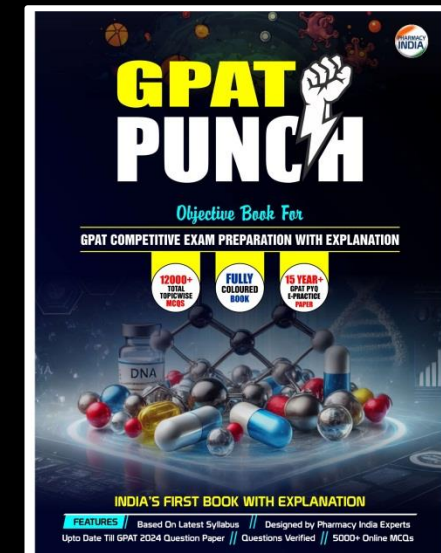
@PharmacyIndia



35.

Tinctures are defined as:

- (a) Aqueous solutions of inorganic salts
- (b) Alcoholic or hydroalcoholic solutions prepared from vegetable drugs or chemical substances
- (c) Viscous preparations for internal use
- (d) Saturated solutions of sucrose



Download Pharmacy India Mobile App from Playstore

TINCTURES



**ALCOHOLIC OR
HYDROALCOHOLIC
SOLUTIONS**



**PREPARED FROM
VEGETABLE DRUGS
OR CHEMICAL
SUBSTANCES**



**ALCOHOL HELPS
EXTRACTION**



**ALSO HELPS
PRESERVATION**



**USUALLY STRONGER
THAN INFUSIONS**

SOLVENT



ALCOHOL

+



WATER

Hydroalcoholic solutions = Alcohol + Water

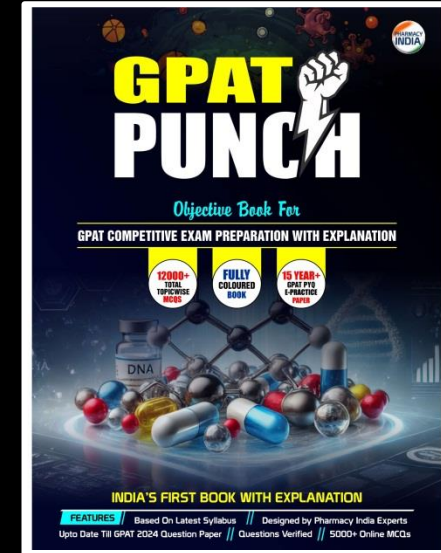


@PharmacyIndia



36. Aromatic waters are primarily used in formulations as:

- (a) Primary preservative
- (b) Suspending agent
- (c) Viscosity builder
- (d) Flavoring vehicle



Download Pharmacy India Mobile App from Playstore

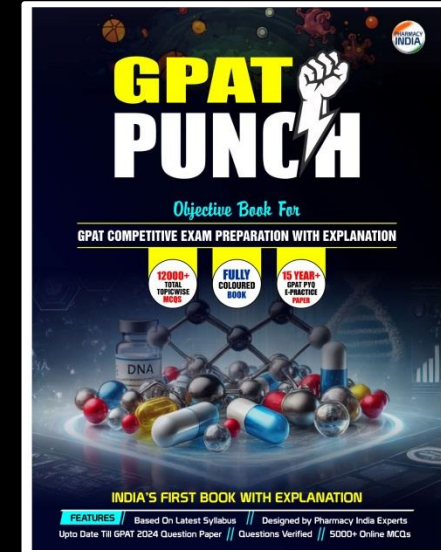


@PharmacyIndia



36. Aromatic waters are primarily used in formulations as:

- (a) Primary preservative
- (b) Suspending agent
- (c) Viscosity builder
- (d) Flavoring vehicle**



Download Pharmacy India Mobile App from Playstore

AROMATIC WATERS



Contain **volatile**
aromatic substances



Pleasant
odor and taste



Used mainly as
flavoring vehicles



Help mask
unpleasant taste



Aqueous
preparations

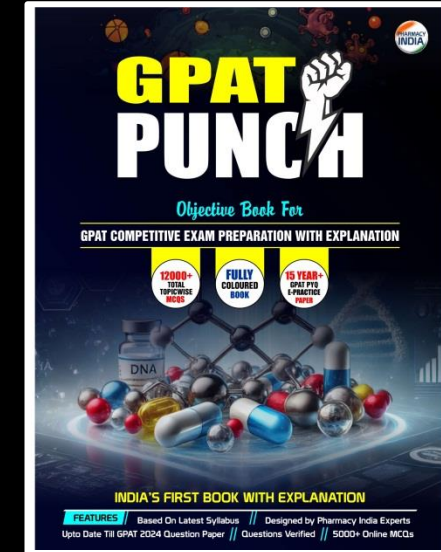


@PharmacyIndia



37. Which liquid preparation is specifically intended for application into body cavities such as vagina, nose or eye?

- (a) Collodion
- (b) Liniment
- (c) Douche
- (d) Paint



Download Pharmacy India Mobile App from Playstore



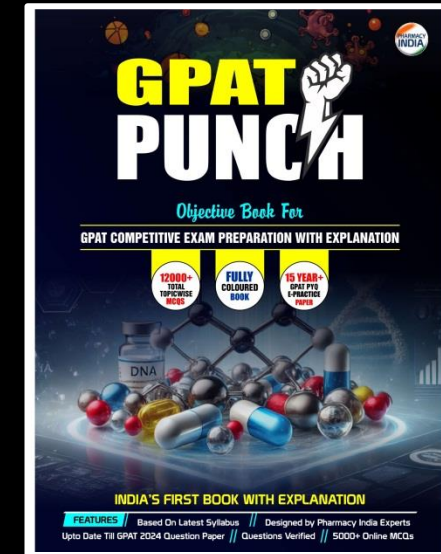
@PharmacyIndia



37.

Which liquid preparation is specifically intended for application into body cavities such as vagina, nose or eye?

- (a) Collodion
- (b) Liniment
- (c) Douche
- (d) Paint



Download Pharmacy India Mobile App from Playstore

DOUCHE



Liquid preparation
for body cavities.



Used in vagina,
nose or eye.



Often for cleansing
or antiseptic action.



Usually aqueous
solution.



VAGINAL
DOUCHE



NASAL
DOUCHE



EYE
DOUCHE



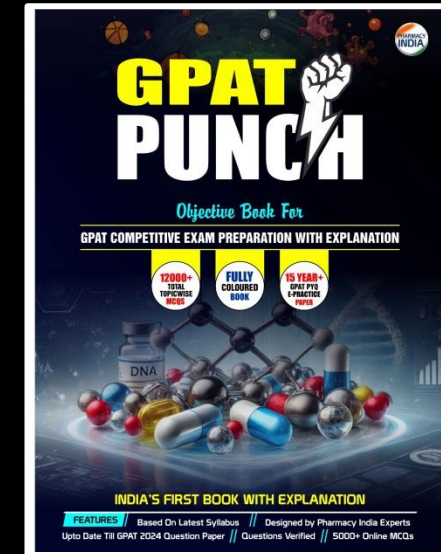
@PharmacyIndia



38.

Menthol and chloroform are often used in liquid oral preparations because they act as:

- (a) Emulsifying agents
- (b) Desensitizing agents for taste buds
- (c) Preservatives only
- (d) Viscosity modifiers



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia



38.

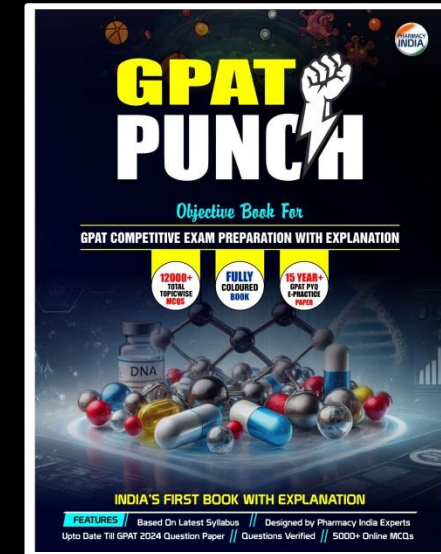
Menthol and chloroform are often used in liquid oral preparations because they act as:

(a) Emulsifying agents

(b) Desensitizing agents for taste buds

(c) Preservatives only

(d) Viscosity modifiers



Download Pharmacy India Mobile App from Playstore

MENTHOL & CHLOROFORM

IN ORAL LIQUIDS



Improve **palatability**.



Desensitize taste buds.



Menthol gives **cooling** sensation.



Chloroform helps taste masking in **small amounts**.



Reduce unpleasant **taste perception**.



MENTHOL



DESENSITIZES
TASTE BUDS



TASTE MASKING
BETTER PALATABILITY

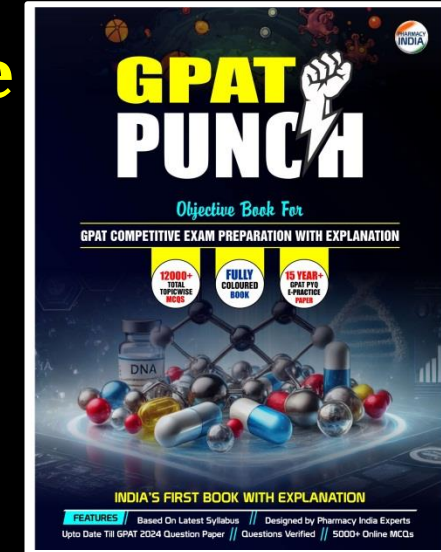


@PharmacyIndia



39. The usual concentration of chlorocresol as preservative in liquid dosage forms is:

- (a) 0.075% to 0.1%
- (b) 0.5% to 1.0%
- (c) 1.5% to 2.0%
- (d) 2.5% to 5.0%



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia



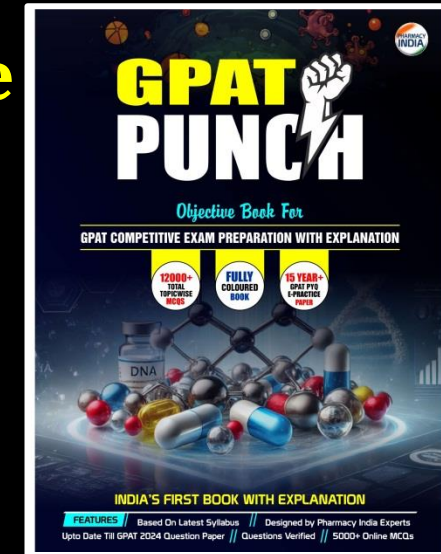
39. The usual concentration of chlorocresol as preservative in liquid dosage forms is:

(a) 0.075% to 0.1%

(b) 0.5% to 1.0%

(c) 1.5% to 2.0%

(d) 2.5% to 5.0%



Download Pharmacy India Mobile App from Playstore

CHLOROCRESOL



Chlorocresol

Antimicrobial preservative.



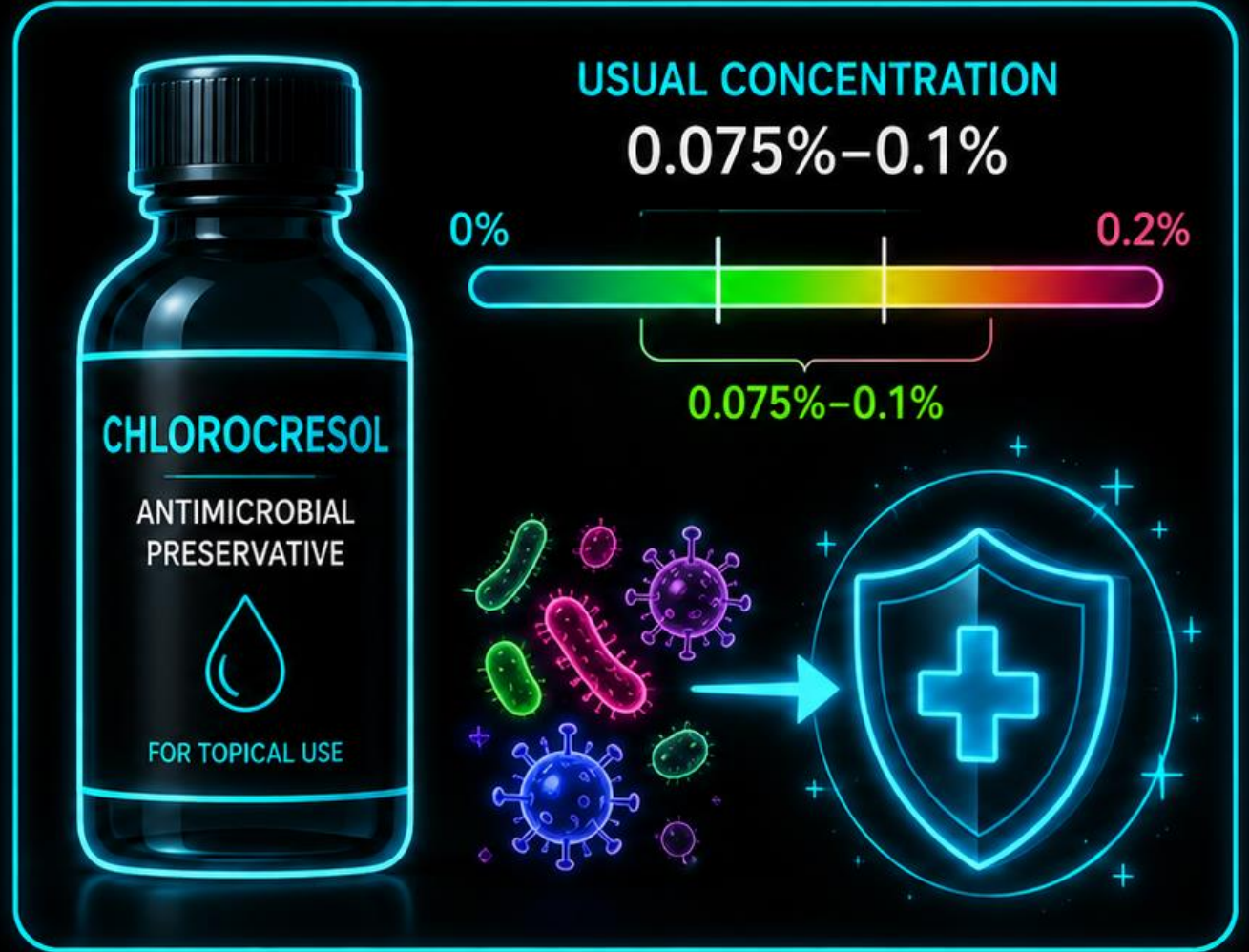
Usual concentration:
0.075%–0.1%



Prevents
microbial contamination.



Too much
may cause irritation.





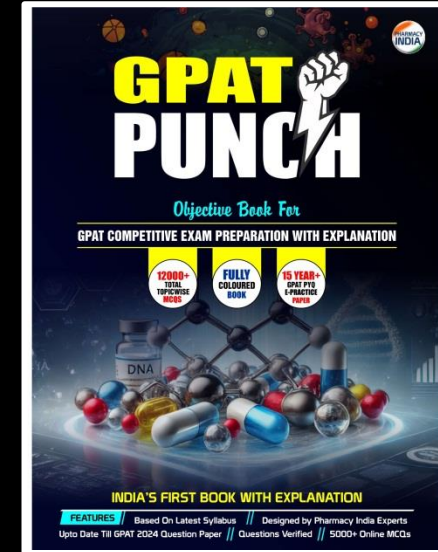
@PharmacyIndia



40.

Enemas are also known by the term:

- (a) Elixirs
- (b) Clysters
- (c) Draughts
- (d) Douches



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia



40.

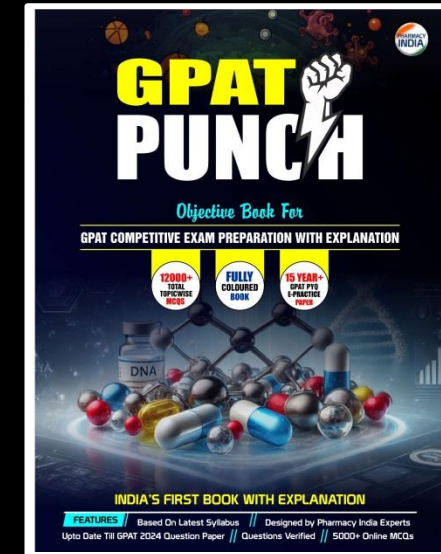
Enemas are also known by the term:

(a) Elixirs

(b) Clysters

(c) Draughts

(d) Douches



Download Pharmacy India Mobile App from Playstore

ENEMA / CLYSTER



RECTAL LIQUID
PREPARATION

=

ENEMA = CLYSTER



RECTAL LIQUID PREPARATION



MAY BE USED FOR
BOWEL EVACUATION



MAY ALSO DELIVER
LOCAL OR SYSTEMIC DRUGS



DIFFERENT FROM **ORAL LIQUIDS**

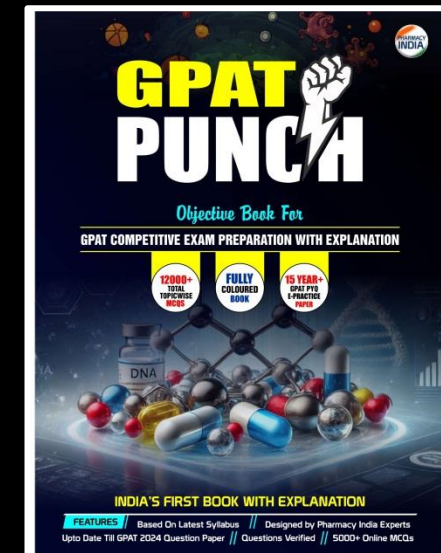


@PharmacyIndia



41. Which preparation is painted on skin or mucous membrane for local action?

- (a) Paint
- (b) Elixir
- (c) Syrup
- (d) Spirit



Download Pharmacy India Mobile App from Playstore

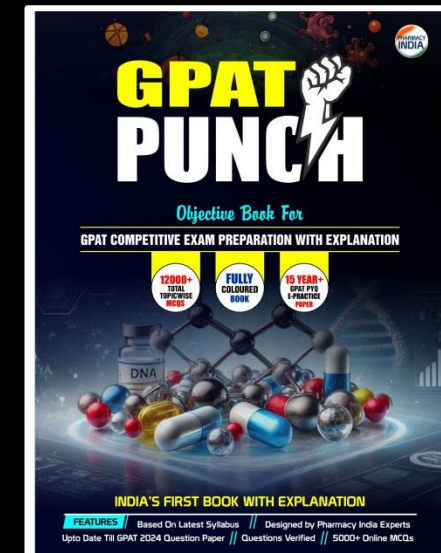


@PharmacyIndia



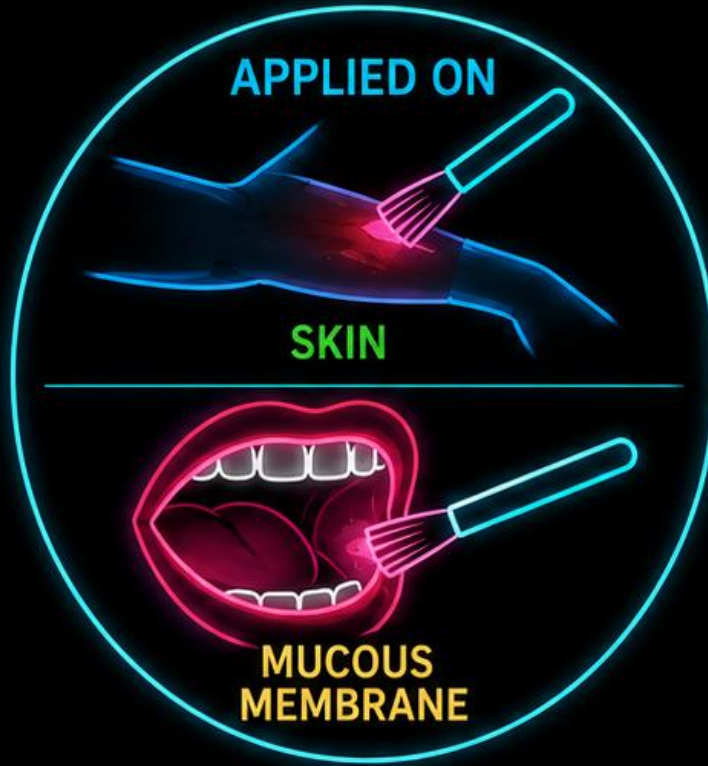
41. Which preparation is painted on skin or mucous membrane for local action?

- (a) Paint
- (b) Elixir
- (c) Syrup
- (d) Spirit



Download Pharmacy India Mobile App from Playstore

P A I N T



FOR EXTERNAL USE ONLY
NOT FOR INTERNAL USE.



Liquid preparation
for **local action**.



Applied on **skin** or
mucous membrane.



May contain **antiseptic**
or **protective agents**.



Applied with **brush /**
applicator.



Not an **oral preparation**.



@PharmacyIndia



42. Which preparation is used for rinsing the throat and is usually not swallowed?

- (a) Gargle**
- (b) Linctus**
- (c) Elixir**
- (d) Draught**



Download Pharmacy India Mobile App from Playstore



42. Which preparation is used for rinsing the throat and is usually not swallowed?

(a) Gargle

(b) Linctus

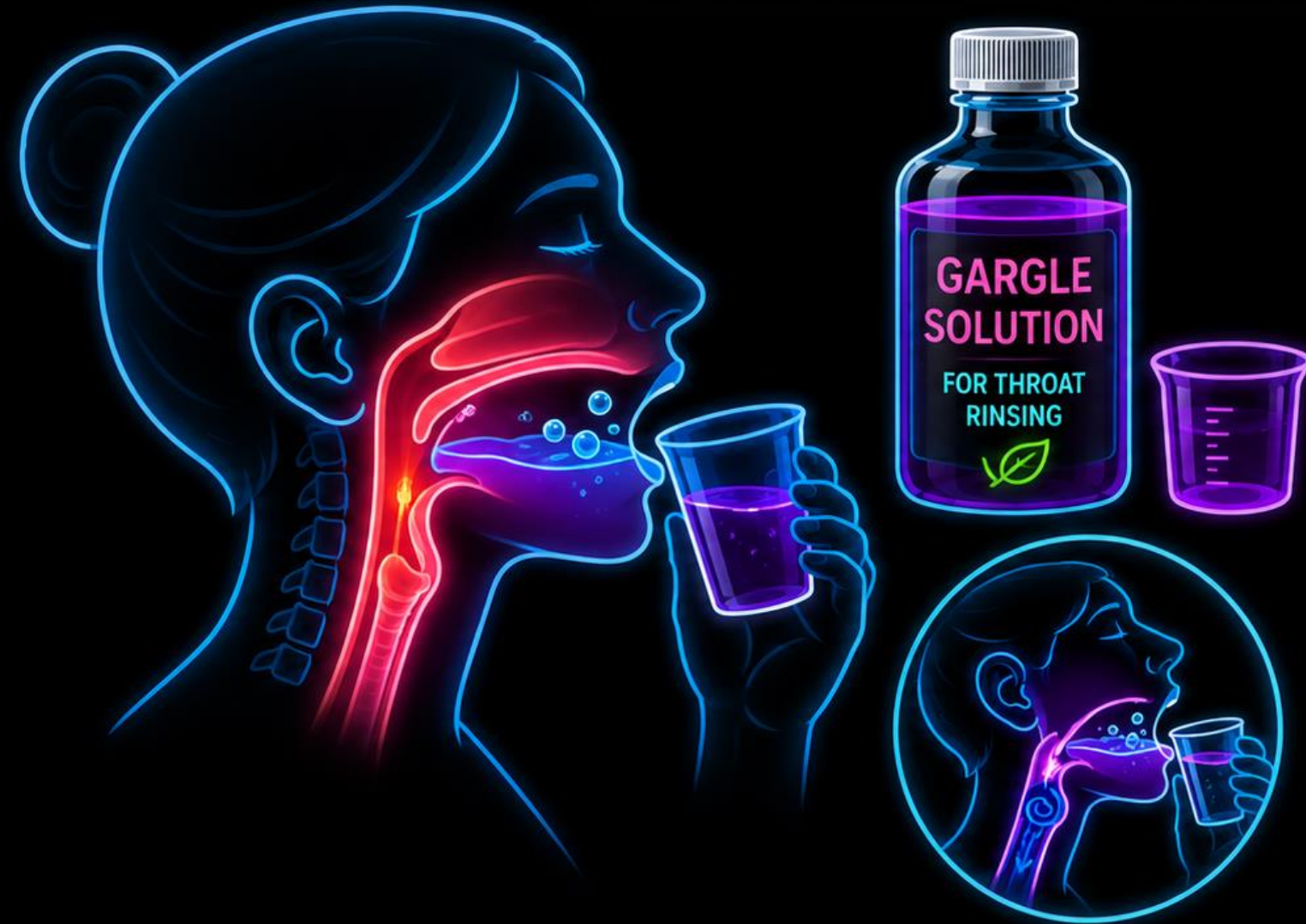
(c) Elixir

(d) Draught



Download Pharmacy India Mobile App from Playstore

GARGLE



Used for **rinsing** the throat.



Acts in **pharyngeal** region.



Usually **not** swallowed.



May contain **antiseptic**, **analgesic** or **soothing** agents.



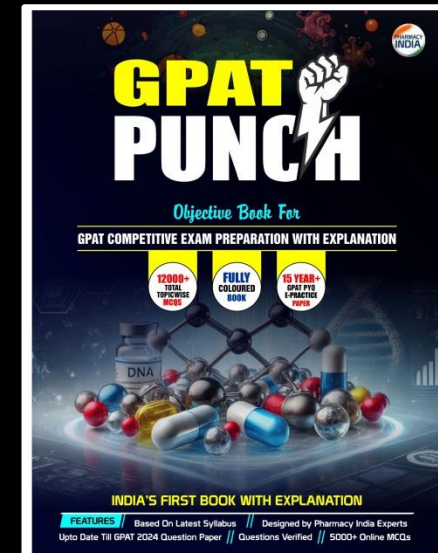
Local **throat** preparation.



@PharmacyIndia

43. Which of the following is commonly used as a humectant and co-solvent in oral liquid preparations?

- (a) Glycerin
- (b) Talc
- (c) Kaolin
- (d) Starch



Download Pharmacy India Mobile App from Playstore



@PharmacyIndia

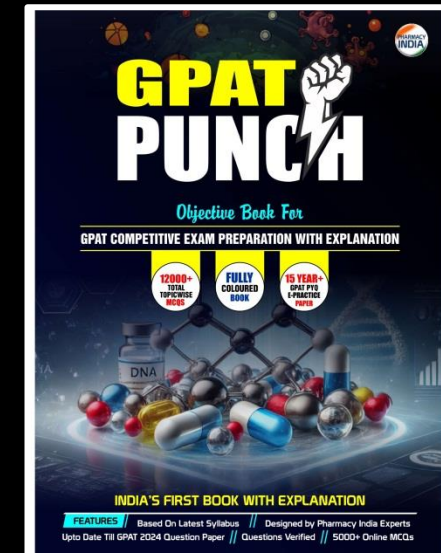
43. Which of the following is commonly used as a humectant and co-solvent in oral liquid preparations?

(a) Glycerin

(b) Talc

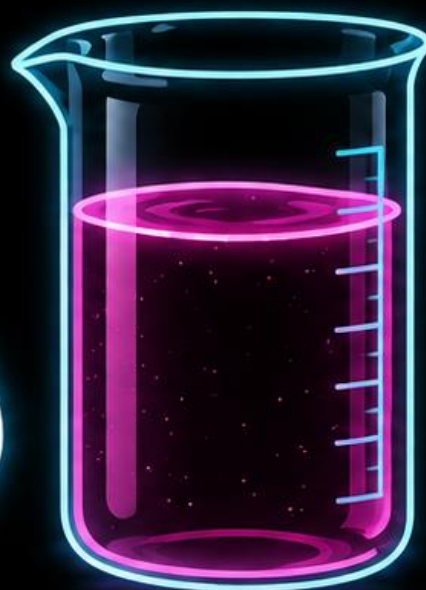
(c) Kaolin

(d) Starch



Download Pharmacy India Mobile App from Playstore

GLYCERIN IN ORAL LIQUIDS



ORAL LIQUID



COMMON HUMECTANT



ACTS AS CO-SOLVENT



ADDS SWEETNESS



IMPROVES VISCOSITY



HELPS PREVENT
SUCROSE CRYSTALLIZATION



USEFUL IN ORAL LIQUIDS

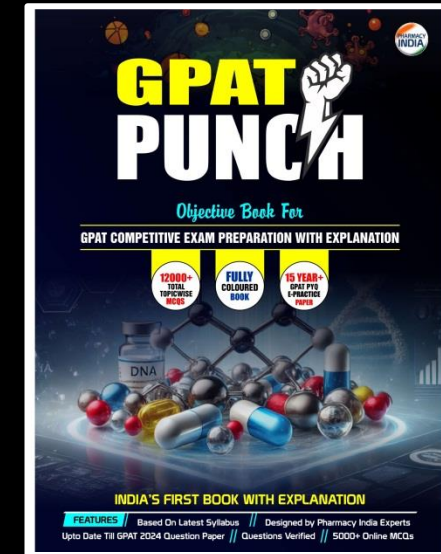


@PharmacyIndia

44.

Which of the following is a common preservative used in oral liquid dosage forms?

- (a) Magnesium stearate
- (b) Lactose
- (c) Starch
- (d) Methyl paraben



Download Pharmacy India Mobile App from Playstore

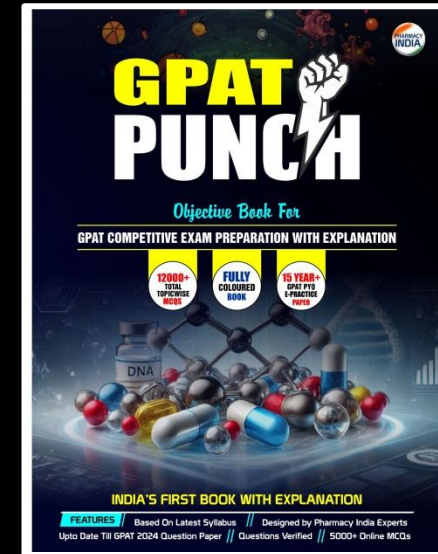


@PharmacyIndia

44.

Which of the following is a common preservative used in oral liquid dosage forms?

- (a) Magnesium stearate
- (b) Lactose
- (c) Starch
- (d) Methyl paraben



Download Pharmacy India Mobile App from Playstore

METHYL PARABEN



COMMON ANTIMICROBIAL
PRESERVATIVE



USED IN ORAL LIQUID
FORMULATIONS



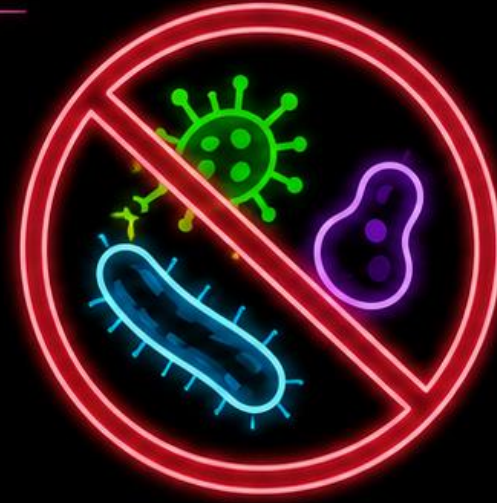
HELPS PREVENT
MICROBIAL SPOILAGE



EFFECTIVE AGAINST
FUNGI AND SOME BACTERIA



IMPROVES
PRODUCT STABILITY





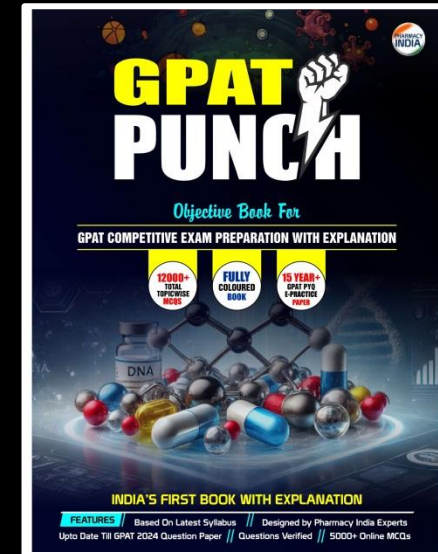
@PharmacyIndia



45.

Which of the following is an example of a sugar-free sweetening agent used in oral liquid preparations?

- (a) Sorbitol
- (b) Sucrose only
- (c) Sodium chloride
- (d) Bentonite



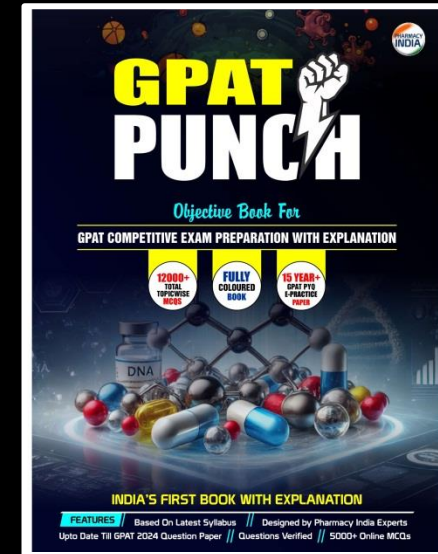
Download Pharmacy India Mobile App from Playstore



@PharmacyIndia

45. Which of the following is an example of a sugar-free sweetening agent used in oral liquid preparations?

- (a) Sorbitol
- (b) Sucrose only
- (c) Sodium chloride
- (d) Bentonite

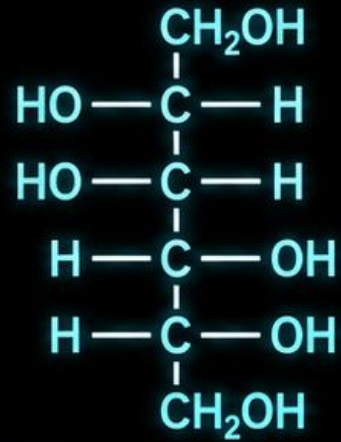


Download Pharmacy India Mobile App from Playstore

SORBITOL



CHEMICAL STRUCTURE



SUGAR-FREE
SWEETENING AGENT



SUGAR-FREE
SWEETENING AGENT



POLYHYDRIC ALCOHOL
(SUGAR ALCOHOL)



USEFUL IN
DIABETIC-FRIENDLY PREPARATIONS



ALSO ACTS AS HUMECTANT



ADDS VISCOSITY



IMPROVES PALATABILITY



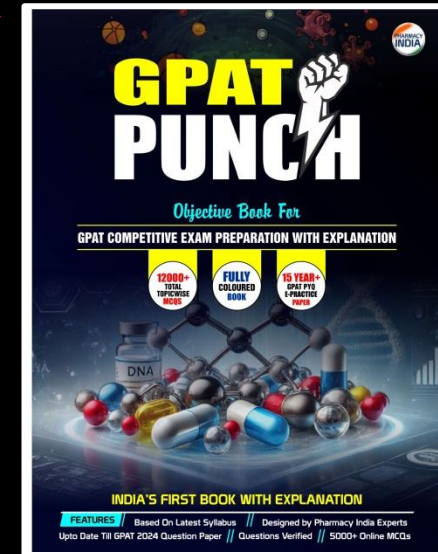
@PharmacyIndia



46.

Which problem is most likely if syrup contains less sucrose than the official concentration?

- (a) Increased self-preservation
- (b) Increased microbial growth risk
- (c) Immediate sterilization
- (d) Complete absence of fermentation



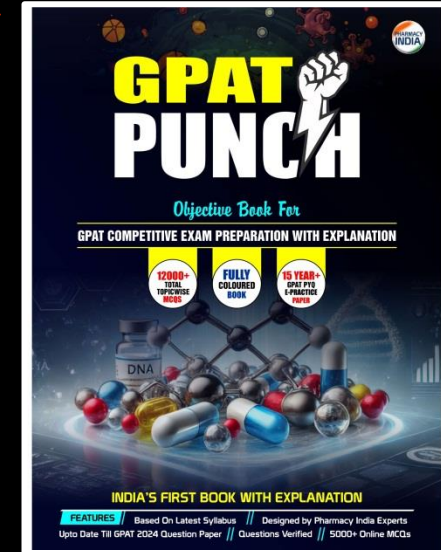
Download Pharmacy India Mobile App from Playstore



@PharmacyIndia

46. Which problem is most likely if syrup contains less sucrose than the official concentration?

- (a) Increased self-preservation
- (b) Increased microbial growth risk
- (c) Immediate sterilization
- (d) Complete absence of fermentation



Download Pharmacy India Mobile App from Playstore

LOW SUCROSE IN SYRUP = MICROBIAL GROWTH RISK



SUCROSE CONCENTRATION

HIGH (OPTIMAL)

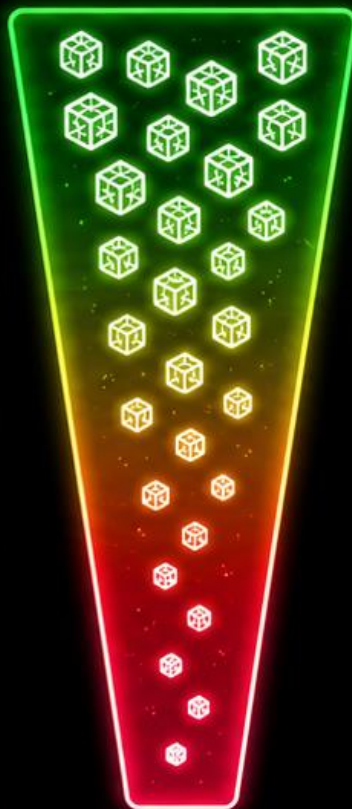
Strong osmotic
protection

MODERATE

Reduced
protection

LOW

Weak or no
protection



Concentrated sucrose
gives osmotic protection.



Official syrup strength
helps self-preservation.



Low sucrose reduces
preservative effect.



Microorganisms grow
more easily.



Fermentation risk
increases.



**LOW SUCROSE = HIGHER RISK
OF MICROBIAL GROWTH & SPOILAGE**





47.

Why are syrups generally palatable for oral administration?

- (a) They contain high concentration of sucrose**
- (b) They are always alcoholic**
- (c) They are always sterile**
- (d) They contain insoluble particles**



Download Pharmacy India Mobile App from Playstore



47.

Why are syrups generally palatable for oral administration?

- (a) They contain high concentration of sucrose**
- (b) They are always alcoholic**
- (c) They are always sterile**
- (d) They contain insoluble particles**



Download Pharmacy India Mobile App from Playstore

WHY SYRUPS ARE PALATABLE



HIGH SUCROSE CONCENTRATION

Provides sweetness and palatability.



MASKS

UNPLEASANT DRUG TASTE

Hides bitterness and off-flavors.



SWEETNESS

IMPROVES PATIENT ACCEPTANCE

Encourages compliance and repeat use.



VISCOSITY IMPROVES MOUTHFEEL

Adds smoothness and pleasing texture.



PLEASANT TASTE EXPERIENCE

Flavor and sweetness enhance overall taste.



USEFUL FOR ORAL ADMINISTRATION

Easy to swallow, especially for all ages.



SWEET, SMOOTH & EFFECTIVE – DESIGNED FOR **BETTER PATIENT EXPERIENCE.**



48.

Which of the following is the main solvent system of elixirs?

- (a) Oil only
- (b) Water only
- (c) Hydroalcoholic solvent
- (d) Solid solvent system



Download Pharmacy India Mobile App from Playstore



48.

Which of the following is the main solvent system of elixirs?

(a) Oil only

(b) Water only

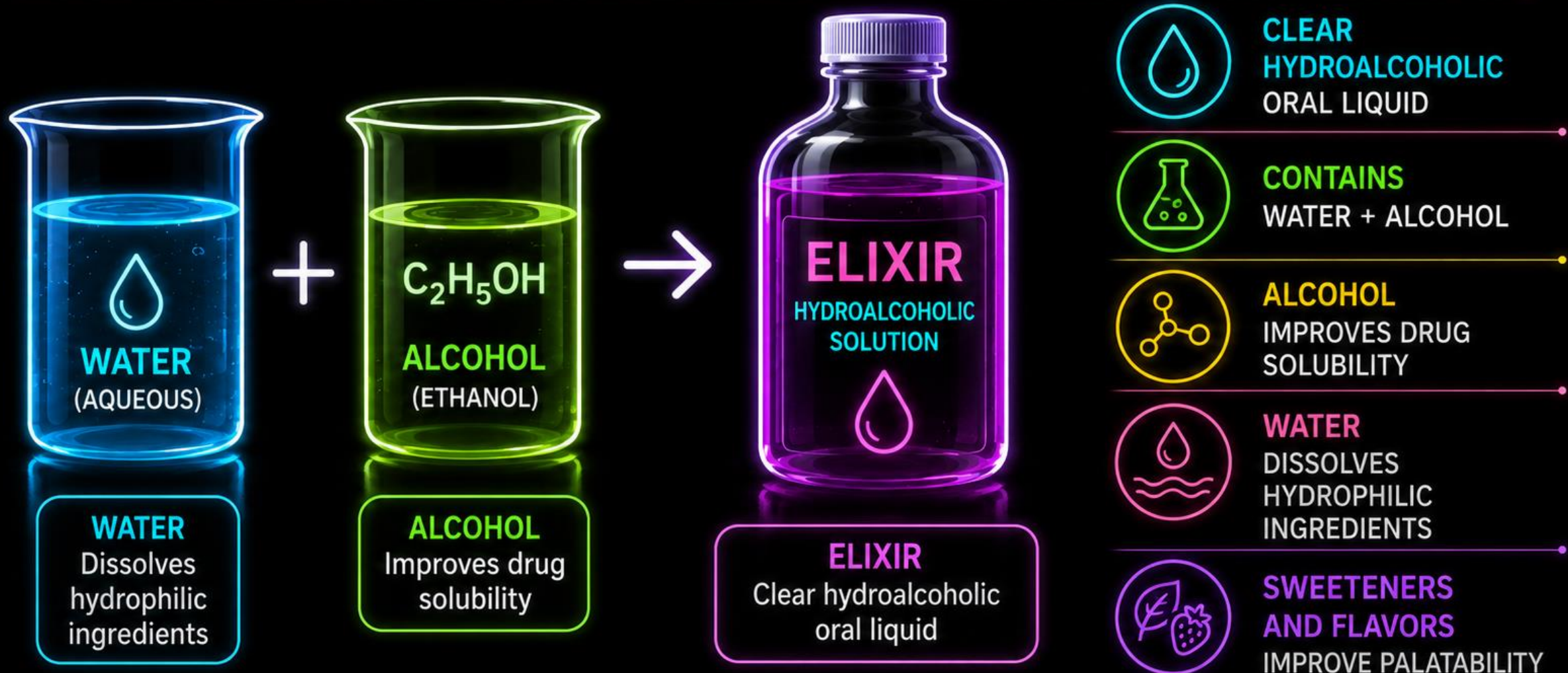
(c) Hydroalcoholic solvent

(d) Solid solvent system



Download Pharmacy India Mobile App from Playstore

ELIXIRS: HYDROALCOHOLIC SOLVENT SYSTEM





49. Which of the following preparations forms a protective film after application to the skin?

- (a) Collodion**
- (b) Elixir**
- (c) Gargle**
- (d) Mouthwash**



Download Pharmacy India Mobile App from Playstore



49.

Which of the following preparations forms a protective film after application to the skin?

(a) Collodion

(b) Elixir

(c) Gargle

(d) Mouthwash



Download Pharmacy India Mobile App from Playstore

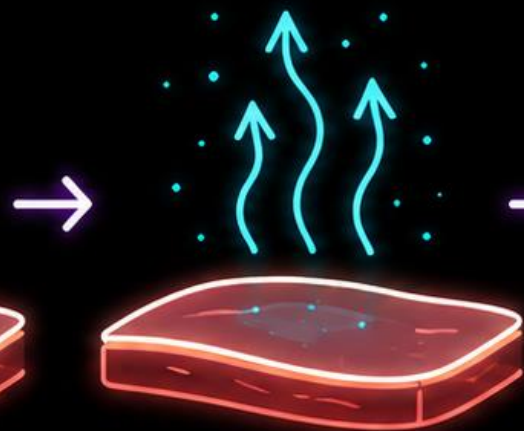
COLLODION FORMS A PROTECTIVE FILM



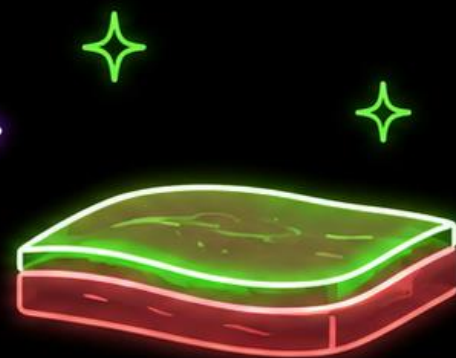
CONTAINS
ETHER + ALCOHOL



APPLY TO
SKIN



SOLVENTS
EVAPORATE QUICKLY



LEAVES A
PROTECTIVE FILM
ON SKIN



SOLUTION OF
PYROXYLIN



CONTAINS
ETHER +
ALCOHOL



SOLVENTS
EVAPORATE
QUICKLY



LEAVES A
PROTECTIVE
FILM ON SKIN



USED FOR
LOCAL
APPLICATION



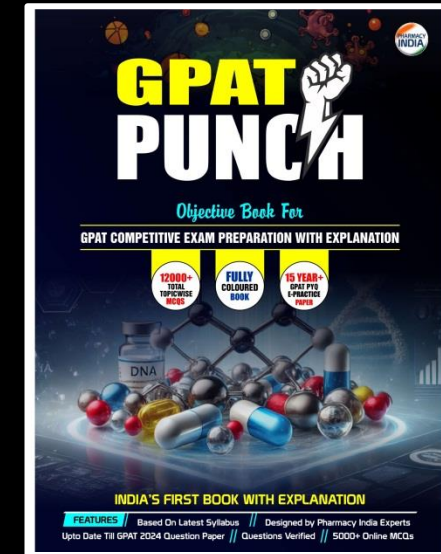
@PharmacyIndia



50.

Which of the following is the major disadvantage of elixirs compared with syrups?

- (a) They are always cloudy
- (b) They contain alcohol and may not be suitable for all patients
- (c) They cannot dissolve any drug
- (d) They are always more viscous than syrups



Download Pharmacy India Mobile App from Playstore



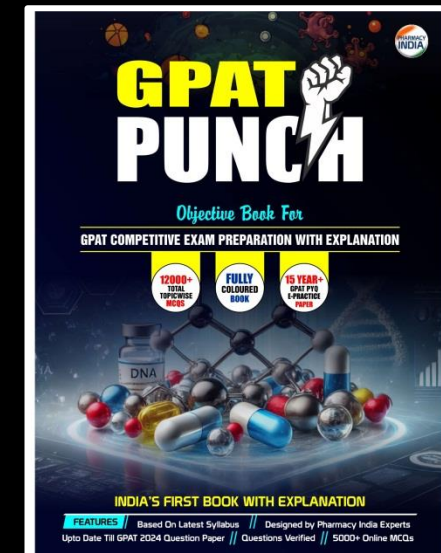
@PharmacyIndia



50.

Which of the following is the major disadvantage of elixirs compared with syrups?

- (a) They are always cloudy
- (b) They contain alcohol and may not be suitable for all patients
- (c) They cannot dissolve any drug
- (d) They are always more viscous than syrups



Download Pharmacy India Mobile App from Playstore

ELIXIRS: MAIN DISADVANTAGE

ELIXIRS



Hydroalcoholic
preparation



Alcohol
improves
solubility



Elixirs are
less viscous
than syrups

VS



MAIN DISADVANTAGE



May be
unsuitable
for children



May be
unsuitable for
alcohol-sensitive
patients

SYRUPS



Syrups are
usually sweeter
and aqueous



Generally
more suitable
for children



Syrups are
more viscous
than elixirs



ALCOHOL WARNING: Elixirs contain alcohol. Use with caution.





@PharmacyIndia



THANK
YOU!



Download Pharmacy India Mobile App from Playstore

ARJUNA SERIES

GPAT 2027 - 28

ADMISSION OPEN



400+ Live Classes



DPP After Topic Completion



700+ Pre-Recorded Lectures



GPAT Syllabus Completion



4-7 Live Classes Weekly



400+ Online Test Series



25,000+ Questions for Practice



Weekend Surprise Test



Weekend Doubt Session



Previous Year & Model Paper Discussion



Digital Library



**DOWNLOAD PHARMACY INDIA
APP FROM PLAY STORE**



6396274917

6395596959



GPAT PLUS

38 PREVIOUS YEAR QUESTION PAPERS
WITH DIGITAL EXPLANATION

←..... FEATURES→



Based on Latest
GPAT Syllabus



Subjectwise
Division



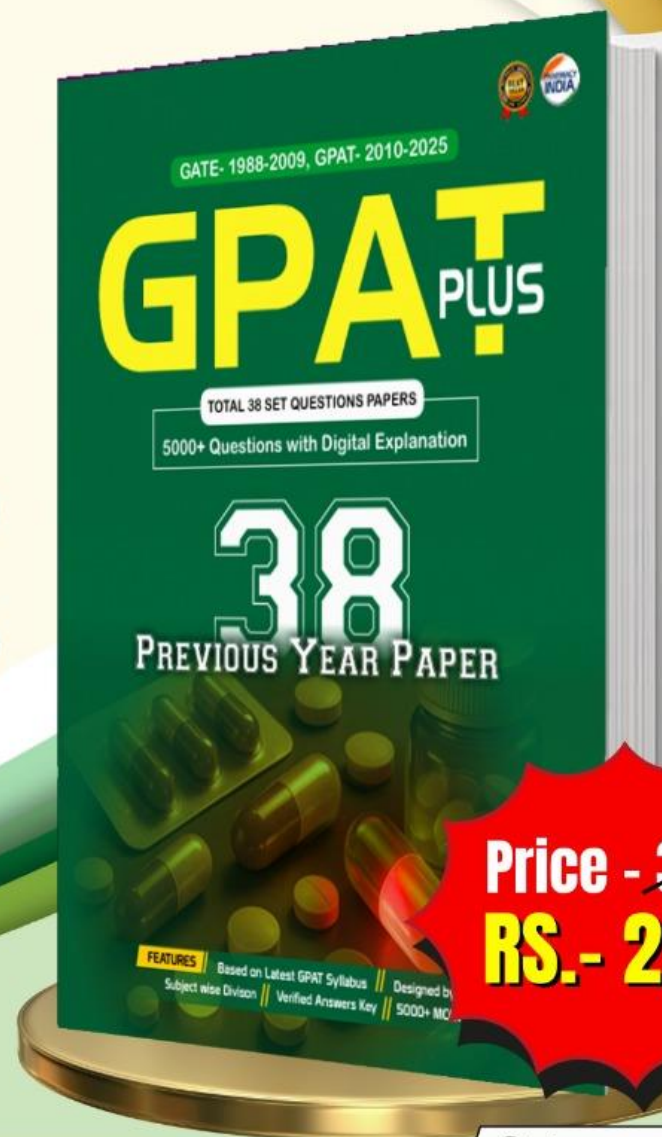
Verified
Questions



Designed
by Experts



Digital
Explanation



DOWNLOAD PHARMACY INDIA APP FROM PLAYSTORE

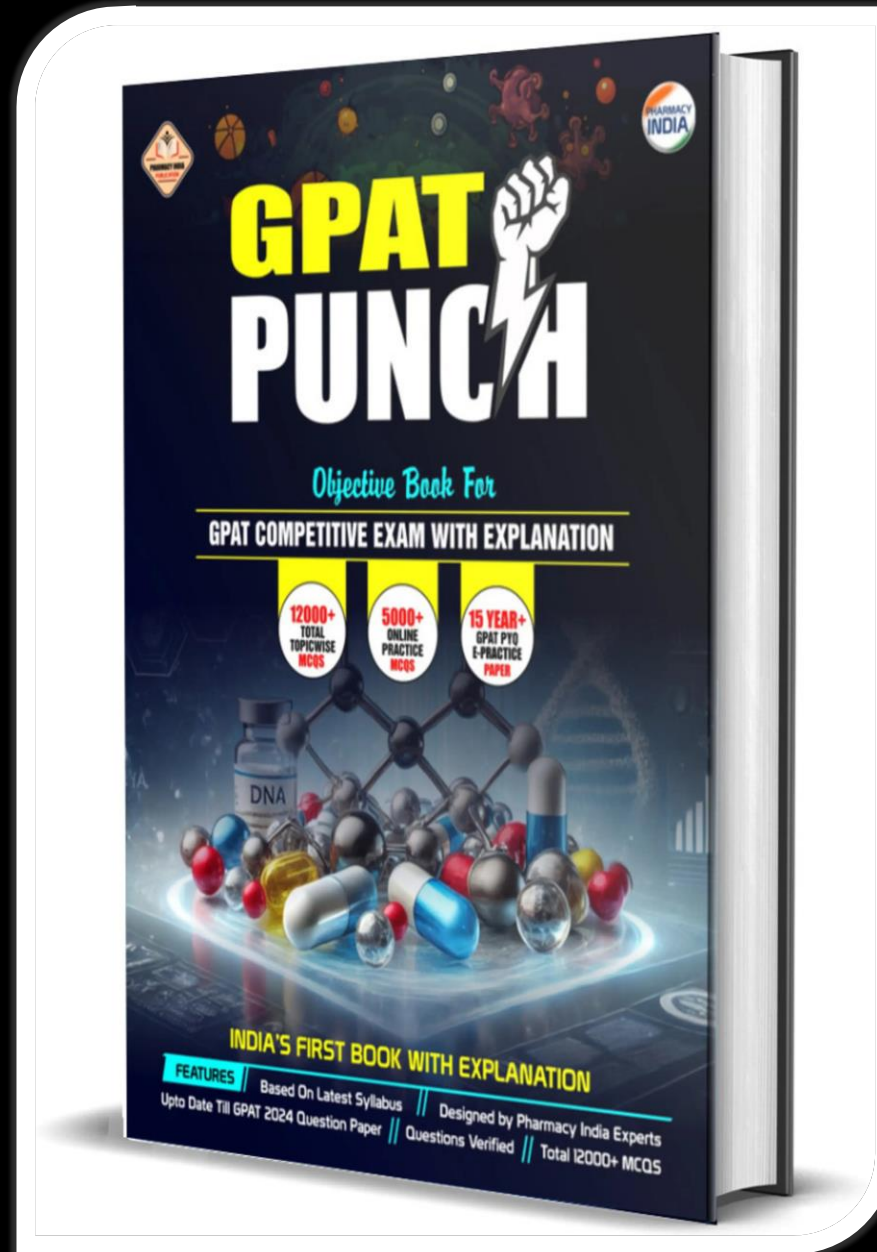


**6395596959
8006781759**

Best Book for GPAT Exam

AVAILABLE ON

Flipkart  amazon



GPAT PUNCH OBJECTIVE BOOK

- Based on Latest Syllabus
- Upto Date Till GPAT 2026 Question Paper
- 5000+ Online Practice MCQs
- Total 12000+ MCQs
- 15 Year+ GPAT PYQ E-Practice Paper

Best Books for GPAT Exam

AVAILABLE ON



G
P
A
T

GPAT BOOSTER BOOKS

- According to Latest Syllabus
- All Topics Covered in Concise Forms
- Important for GPAT Exam
- Subject-wise Previous Year Questions included
- Includes short notes for rapid last-minute revision

DAILY UPDATES
जुड़िए PHARMACY INDIA
के साथ.....

WHATSAPP & TELEGRAM SE JUDNE KE LIYE
ICONS PAR CLICK KARE

