

CHEMISTRY · JEE MAIN

Chemistry in Everyday Life

Chapter-wise previous year questions, with answer key

40

PYQS

2020–2023

PAPERS

5

TOPICS

Drugs and Medicines

Food Chemistry

Detergents and Cleansing Agents

Soaps, Detergents and Dyes

Drugs and Their Classification

- 1 Attempt each question on paper first — they're grouped by topic, newest papers first.
- 2 Check yourself against the answer key at the end.
- 3 Got one wrong? Tap “Step-by-step solution” under it for the full working.

Stuck on a question?

Every question has a free step-by-step solution on PrepWiser — tap “Step-by-step solution” under it.

Practise this chapter online with instant answer checking: prepwise.in/learn · No signup needed to browse

Q1 JEE Main 2023 · 31 Jan · Shift 2

Which of the following compounds are not used as disinfectants ?

- A. Chloroxylonol
- B. Bithional
- C. Veronal
- D. Prontosil
- E. Terpeneol

Choose the correct answer from the options given below :

- | | |
|-------------|-------------|
| (A) A, B | (B) C, D |
| (C) B, D, E | (D) A, B, E |

[Step-by-step solution ► prepwisar.in/questions/3feUmwAkIL](https://www.prepwisar.in/questions/3feUmwAkIL)

Q2 JEE Main 2023 · 29 Jan · Shift 2

A doctor prescribed the drug Equanil to a patient. The patient was likely to have symptoms of which disease?

- | | |
|------------------------|---------------------------------|
| (A) Stomach ulcers | (B) Depression and hypertension |
| (C) Anxiety and stress | (D) Hyperacidity |

[Step-by-step solution ► prepwisar.in/questions/7Iea7D7SoG](https://www.prepwisar.in/questions/7Iea7D7SoG)

Q3 JEE Main 2023 · 25 Jan · Shift 1

Which of the following statements is incorrect for antibiotics?

- (A) An antibiotic should promote the growth or survival of microorganisms.
- (B) An antibiotic must be a product of metabolism.
- (C) An antibiotic should be effective in low concentrations.
- (D) An antibiotic is a synthetic substance produced as a structural analogue of naturally occurring antibiotic.

[Step-by-step solution ► prepwisar.in/questions/t8ZRE-dW3L](https://www.prepwisar.in/questions/t8ZRE-dW3L)

Q4 JEE Main 2023 · 24 Jan · Shift 1

Given below are two statements:

Statement I : Noradrenaline is a neurotransmitter.

Statement II : Low level of noradrenaline is not the cause of depression in human.

In the light of the above statements, choose the correct answer from the options given below

- (A) Both Statement I and Statement II are incorrect
- (B) Statement I is correct but Statement II is incorrect
- (C) Both Statement I and Statement II are correct
- (D) Statement I is incorrect but Statement II is correct

[Step-by-step solution ► prepwiser.in/questions/3rVpmnv1J_](https://www.prepwiser.in/questions/3rVpmnv1J_)

Q5 JEE Main 2022 · 25 Jul · Shift 2

Some drugs bind to a site other than the active site of an enzyme. This site is known as

- (A) non-active site
- (B) allosteric site
- (C) competitive site
- (D) therapeutic site

[Step-by-step solution ► prepwiser.in/questions/j4j7Gz8-n8](https://www.prepwiser.in/questions/j4j7Gz8-n8)

Q6 JEE Main 2022 · 29 Jun · Shift 2

The mixture of chloroxylenol and terpineol is an example of

- (A) antiseptic
- (B) pesticide
- (C) disinfectant
- (D) narcotic analgesic

[Step-by-step solution ► prepwiser.in/questions/YZjlkSBB-Z](https://www.prepwiser.in/questions/YZjlkSBB-Z)

Q7 JEE Main 2022 · 25 Jun · Shift 2

An antiseptic dettol is a mixture of two compounds 'A' and 'B' where A has 6π electrons and B has 2π electrons. What is 'B'?

- (A) Bithionol
- (B) Terpineol
- (C) Chloroxylenol
- (D) Chloramphenicol

[Step-by-step solution ► prepwiser.in/questions/h4ch8CggHp](https://www.prepwiser.in/questions/h4ch8CggHp)

Q8 JEE Main 2022 · 24 Jun · Shift 1

Which of the following is not a broad spectrum antibiotic?

- (A) Vancomycin
- (B) Ampicillin
- (C) Ofloxacin
- (D) Penicillin G

[Step-by-step solution ► prepwiser.in/questions/DeON3XMktc](https://www.prepwiser.in/questions/DeON3XMktc)

Q9 JEE Main 2021 · 16 Mar · Shift 1

The functions of antihistamine are :

- (A) Antiallergic and Analgesic
- (B) Antacid and antiallergic
- (C) Analgesic and antacid
- (D) Antiallergic and antidepressant

[Step-by-step solution ► prepwiser.in/questions/jEwx6WYUHY](https://www.prepwiser.in/questions/jEwx6WYUHY)

Q10 JEE Main 2023 · 31 Jan · Shift 1

Which of the following artificial sweeteners has the highest sweetness value in comparison to cane sugar ?

- (A) Alitame (B) Sucralose
(C) Saccharin (D) Aspartame

[Step-by-step solution ► prepwisser.in/questions/zYb3BVLf3O](https://www.prepwisser.in/questions/zYb3BVLf3O)

Q11 JEE Main 2023 · 25 Jan · Shift 2

Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A : Butylated hydroxy anisole when added to butter increases its shelf life.

Reason R : Butylated hydroxy anisole is more reactive towards oxygen than food.

In the light of the above statements, choose the most appropriate answer from the options given below

- (A) A is correct but R is not correct
(B) Both A and R are correct but R is NOT the correct explanation of A
(C) Both A and R are correct and R is the correct explanation of A
(D) A is not correct but R is correct

[Step-by-step solution ► prepwisser.in/questions/wQ5-ODNodh](https://www.prepwisser.in/questions/wQ5-ODNodh)

Q12 JEE Main 2022 · 28 Jun · Shift 1

Which amongst the following is not a pesticide?

- (A) DDT (B) Organophosphates
(C) Dieldrin (D) Sodium arsenite

[Step-by-step solution ► prepwisser.in/questions/rdFK9HGpV8](https://www.prepwisser.in/questions/rdFK9HGpV8)

Q13 JEE Main 2022 · 25 Jun · Shift 1

Which one of the following is an example of artificial sweetner?

- (A) Bithional (B) Alitame
(C) Salvarsan (D) Lactose

[Step-by-step solution ► prepwisser.in/questions/KX8y5juCZd](https://www.prepwisser.in/questions/KX8y5juCZd)

Q14 JEE Main 2021 · 17 Mar · Shift 2

Match List - I with List - II.

List - I Chemical Compound	List - II Used as
(a) Sucralose	(i) Synthetic detergent
(b) Glyceryl ester of stearic acid	(ii) Artificial sweetener
(c) Sodium benzoate	(iii) Antiseptic
(d) Bithionol	(iv) Food preservative

Choose the correct match :

(A) (a)-(i), (b)-(ii), (c)-(iv), (d)-(iii)

(B) (a)-(iii), (b)-(ii), (c)-(iv), (d)-(i)

(C) (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i)

(D) (a)-(ii), (b)-(i), (c)-(iv), (d)-(iii)

[Step-by-step solution ► prepwiser.in/questions/UpzO0wUoEp](https://www.prepwiser.in/questions/UpzO0wUoEp)

Detergents and Cleansing Agents · 4 PYQs

Q15 JEE Main 2023 · 10 Apr · Shift 2

The reaction used for preparation of soap from fat is :

(A) an addition reaction

(B) alkaline hydrolysis reaction

(C) reduction reaction

(D) an oxidation reaction

[Step-by-step solution ► prepwiser.in/questions/R_3evsguB6](https://www.prepwiser.in/questions/R_3evsguB6)

Q16 JEE Main 2021 · 25 Jul · Shift 1

Which one of the following chemical agent is not being used for dry-cleaning of clothes?

(A) H_2O_2

(B) CCl_4

(C) Liquid CO_2

(D) $\text{Cl}_2\text{C} = \text{CCl}_2$

[Step-by-step solution ► prepwiser.in/questions/3J8eq1Bgbv](https://www.prepwiser.in/questions/3J8eq1Bgbv)

Q17 JEE Main 2021 · 20 Jul · Shift 1

Green chemistry in day-to-day life is in the use of :

(A) Chlorine for bleaching of paper

(B) Large amount of water alone for washing clothes

(C) Tetrachloroethene for laundry

(D) Liquified CO_2 for dry cleaning of clothes

[Step-by-step solution ► prepwiser.in/questions/WmPvciEnAw](https://www.prepwiser.in/questions/WmPvciEnAw)

Q18 JEE Main 2020 · 6 Sep · Shift 1

Kraft temperature is the temperature :

- (A) below which the aqueous solution of detergents starts freezing.
- (B) above which the formation of micelles takes place.
- (C) below which the formation of micelles takes place.
- (D) above which the aqueous solution of detergents starts boiling.

[Step-by-step solution ► prepwiser.in/questions/IjVXAQxInK](https://www.prepwiser.in/questions/IjVXAQxInK)

Soaps, Detergents and Dyes · 4 PYQs

Q19 JEE Main 2022 · 27 Jul · Shift 2

Which of the following enhances the lathering property of soap?

- (A) Sodium stearate
- (B) Sodium carbonate
- (C) Sodium rosinate
- (D) Trisodium phosphate

[Step-by-step solution ► prepwiser.in/questions/v-IjJBVcKU](https://www.prepwiser.in/questions/v-IjJBVcKU)

Q20 JEE Main 2022 · 30 Jun · Shift 1

Which one of the following chemicals has not been used for the dry cleaning of clothes?

- (A) Tetrachloroethene
- (B) Liquid CO_2
- (C) Ethanol
- (D) H_2O_2

[Step-by-step solution ► prepwiser.in/questions/Q10vmSpHxv](https://www.prepwiser.in/questions/Q10vmSpHxv)

Q21 JEE Main 2022 · 25 Jun · Shift 1

Using very little soap while washing clothes, does not serve the purpose of cleaning of clothes, because :

- (A) soap particles remain floating in water as ions.
- (B) the hydrophobic part of soap is not able to take away grease.
- (C) the micelles are not formed due to concentration of soap, below its CMC value.
- (D) colloidal structure of soap in water is completely disturbed.

[Step-by-step solution ► prepwiser.in/questions/6xWHnl6IK0](https://www.prepwiser.in/questions/6xWHnl6IK0)

Q22 JEE Main 2021 · 25 Jul · Shift 1

Sodium stearate $\text{CH}_3(\text{CH}_2)_{16}\text{COO}^-\text{Na}^+$ is an anionic surfactant which forms micelles in oil.

Choose the correct statement for it from the following :

- (A) It forms spherical micelles with $\text{CH}_3(\text{CH}_2)_{16}$ - group pointing towards the centre of sphere.
- (B) It forms non-spherical micelles with $-\text{COO}^-$ group pointing outwards on the surface.
- (C) It forms spherical micelles with $\text{CH}_3(\text{CH}_2)_{16}$ - group pointing outwards on the surface of sphere
- (D) It forms non-spherical micelles with $\text{CH}_3(\text{CH}_2)_{16}$ - group pointing towards the centre.

[Step-by-step solution ► prepwiser.in/questions/CxnuD-86WL](https://www.prepwiser.in/questions/CxnuD-86WL)

Q23 JEE Main 2023 · 8 Apr · Shift 2

The statement/s which are true about antagonists from the following is/are:

- A. They bind to the receptor site.
- B. Get transferred inside the cell for their action.
- C. Inhibit the natural communication of the body.
- D. Mimic the natural messenger.

Choose the correct answer from the options given below:

- | | |
|-------------|----------------|
| (A) B only | (B) A and B |
| (C) A and C | (D) A, C and D |

[Step-by-step solution ► prepwiser.in/questions/MDaU2trW-Y](https://www.prepwiser.in/questions/MDaU2trW-Y)

Q24 JEE Main 2023 · 6 Apr · Shift 2

Given below are two statements:

Statement I: Morphine is a narcotic analgesic. It helps in relieving pain without producing sleep.

Statement II: Morphine and its derivatives are obtained from opium poppy.

In the light of the above statements, choose the correct answer from the options given below

- (A) Both Statement I and Statement II are true
- (B) Statement I is true but Statement II is false
- (C) Both Statement I and Statement II are false
- (D) Statement I is false but Statement II is true

[Step-by-step solution ► prepwiser.in/questions/KGmfwtEP6C](https://www.prepwiser.in/questions/KGmfwtEP6C)

Q25 JEE Main 2023 · 1 Feb · Shift 2

Among the following, the number of tranquilizer/s is/are _____.

- A. Chloroliazepoxide
- B. Veronal
- C. Valium
- D. Salvarsan

Numerical answer — enter the value.

[Step-by-step solution ► prepwiser.in/questions/PdDqIfjw4z](https://www.prepwiser.in/questions/PdDqIfjw4z)

Q26 JEE Main 2023 · 30 Jan · Shift 1

Amongst the following compounds, which one is an antacid?

- | | |
|-----------------|---------------------|
| (A) Ranitidine | (B) Brompheniramine |
| (C) Terfenadine | (D) Meprobamate |

[Step-by-step solution ► prepwiser.in/questions/cGnRIIqw7q](https://www.prepwiser.in/questions/cGnRIIqw7q)

Q27 JEE Main 2023 · 30 Jan · Shift 2

Given below are two statements: One is labelled as **Assertion A** and the other is labelled as **Reason R**.

Assertion A: Antihistamines do not affect the secretion of acid in stomach.

Reason R : Antiallergic and antacid drugs work on different receptors.

In the light of the above statements, choose the **correct** answer from the options given below:

- (A) A is false but R is true
- (B) Both A and R are true but R is not the correct explanation of A
- (C) Both A and R are true and R is the correct explanation of A
- (D) A is true but R is false

[Step-by-step solution ► prepwisar.in/questions/B5bOWIQaf8](https://www.prepwisar.in/questions/B5bOWIQaf8)

Q28 JEE Main 2022 · 28 Jul · Shift 1

Statements about Enzyme Inhibitor Drugs are given below :

- (A) There are Competitive and Non-competitive inhibitor drugs.
- (B) These can bind at the active sites and allosteric sites.
- (C) Competitive Drugs are allosteric site blocking drugs.
- (D) Non-competitive Drugs are active site blocking drugs.

Choose the correct answer from the options given below:

- (A) (A), (D) only
- (B) (A), (C) only
- (C) (A), (B) only
- (D) (A), (B), (C) only

[Step-by-step solution ► prepwisar.in/questions/rwh7RSelbB](https://www.prepwisar.in/questions/rwh7RSelbB)

Q29 JEE Main 2022 · 28 Jul · Shift 2

Two statements in respect of drug-enzyme interaction are given below

Statement I : Action of an enzyme can be blocked only when an inhibitor blocks the active site of the enzyme.

Statement II : An inhibitor can form a strong covalent bond with the enzyme.

In the light of the above statements, choose the correct answer from the options given below

- (A) Both Statement I and Statement II are true
- (B) Both Statement I and Statement II are false
- (C) Statement I is true but Statement II is false
- (D) Statement I is false but Statement II is true

[Step-by-step solution ► prepwisar.in/questions/O5kcV2RrNs](https://www.prepwisar.in/questions/O5kcV2RrNs)

Q30 JEE Main 2022 · 26 Jul · Shift 2

How many of the following drugs is/are example(s) of broad spectrum antibiotics?

Ofloxacin, Penicillin G, Terpeneol, Salvarsan.

Numerical answer — enter the value.

[Step-by-step solution ► prepwisar.in/questions/pRCWDKQTGI](https://www.prepwisar.in/questions/pRCWDKQTGI)

Q31 JEE Main 2022 · 25 Jul · Shift 1

Drugs used to bind to receptors, inhibiting its natural function and blocking a message are called:

- (A) Agonists (B) Antagonists
(C) Allosterists (D) Anti histaminists

[Step-by-step solution ► prepwisar.in/questions/xuimBsn34A](https://www.prepwisar.in/questions/xuimBsn34A)

Q32 JEE Main 2022 · 30 Jun · Shift 1

How many of the following drugs belong to the tranquilizer class _____ ?

Veronal, Luminal, Propanal, Seconal

Numerical answer — enter the value.

[Step-by-step solution ► prepwisar.in/questions/Q2AvKENSyt](https://www.prepwisar.in/questions/Q2AvKENSyt)

Q33 JEE Main 2021 · 27 Jul · Shift 1

Match List - I with List - II :

List-I (Drug)	List-II (Class of Drug)
(a) Furacin	(i) Antibiotic
(b) Arsphenamine	(ii) Tranquilizers
(c) Dimetone	(iii) Antiseptic
(d) Valium	(iv) Synthetic antihistamines

Choose the most appropriate match :

- (A) (a)-(i), (b)-(iii), (c)-(iv), (d)-(ii) (B) (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)
(C) (a)-(ii), (b)-(i), (c)-(iii), (d)-(iv) (D) (a)-(iii), (b)-(i), (c)-(iv), (d)-(ii)

[Step-by-step solution ► prepwisar.in/questions/iHLc1tPvag](https://www.prepwisar.in/questions/iHLc1tPvag)

Q34 JEE Main 2021 · 18 Mar · Shift 1

Match the list - I with list - II

List - I (Class of Drug)	List - II (Example)
(a) Antacid	(i) Novestrol
(b) Artificial sweetener	(ii) Cimetidine
(c) Antifertility	(iii) Valium
(d) Tranquilizers	(iv) Alitame

- (A) (a) - (ii), (b) - (iv), (c) - (i), (d) - (iii)
(B) (a) - (iv), (b) - (i), (c) - (ii), (d) - (iii)
(C) (a) - (iv), (b) - (iii), (c) - (i), (d) - (ii)
(D) (a) - (ii), (b) - (iv), (c) - (iii), (d) - (i)

[Step-by-step solution ► prepwisar.in/questions/9CQwp3RTHk](https://www.prepwisar.in/questions/9CQwp3RTHk)

Match List - I with List - II :

List - I (Class of Chemicals)	List - II (Example)
(a) Antifertility drug	(i) Meprobamate
(b) Antibiotic	(ii) Alitame
(c) Tranquilizer	(iii) Norethindrone
(d) Artificial Sweetener	(iv) Salvarsan

Choose the most appropriate match :

(A) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)

(B) (a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)

(C) (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i)

(D) (a)-(ii), (b)-(iv), (c)-(i), (d)-(iii)

[Step-by-step solution ► prepwiser.in/questions/hUQqhYj0U2](https://www.prepwiser.in/questions/hUQqhYj0U2)

With respect to drug-enzyme interaction, identify the wrong statement.

(A) Allosteric inhibitor changes the enzyme's active site

(B) Allosteric inhibitor competes with the enzyme's active site

(C) Competitive inhibitor binds to the enzyme's active site

(D) Non-Competitive inhibitor binds to the allosteric site

[Step-by-step solution ► prepwiser.in/questions/Wma_BBMDYC](https://www.prepwiser.in/questions/Wma_BBMDYC)

Match List - I and List - II.

List I	List II
(a) Valium	(i) Antifertility drug
(b) Morphine	(ii) Pernicious anaemia
(c) Norethindrone	(iii) Analgesic
(d) Vitamin B_{12}	(iv) Tranquilizer

(A) (a)-(i), (b)-(iii), (c)-(iv), (d)-(ii)

(B) (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i)

(C) (a)-(ii), (b)-(iv), (c)-(iii), (d)-(i)

(D) (a)-(iv), (b)-(iii), (c)-(i), (d)-(ii)

[Step-by-step solution ► prepwiser.in/questions/kQhXdt7sPZ](https://www.prepwiser.in/questions/kQhXdt7sPZ)

If a person is suffering from the deficiency of nor-adrenaline, what kind of drug can be suggested?

(A) Anti-inflammatory

(B) Antihistamine

(C) Analgesic

(D) Antidepressant

[Step-by-step solution ► prepwiser.in/questions/yY1wuytiHv](https://www.prepwiser.in/questions/yY1wuytiHv)

Q39 JEE Main 2020 · 4 Sep · Shift 2

The mechanism of action of "Terfenadine" (Seldane) is :

- (A) Activates the histamine receptor
- (B) Helps in the secretion of histamine
- (C) Inhibits the secretion of histamine
- (D) Inhibits the action of histamine receptor

Step-by-step solution ► [prepwiser.in/questions/qSpC16khJQ](https://www.prepwiser.in/questions/qSpC16khJQ)

Q40 JEE Main 2020 · 3 Sep · Shift 2

Match the following drugs with their therapeutic actions :

(i) Ranitidine	(a) Antidepressant
(ii) Nardil (Phenelzine)	(b) Antibiotic
(iii) Chloramphenicol	(c) Antihistamine
(iv) Dimetane (Brompheniramine)	(d) Antacid
	(e) Analgesic

(A) (i)-(a); (ii)-(c); (iii)-(b); (iv)-(e)

(C) (i)-(d); (ii)-(a); (iii)-(b); (iv)-(c)

(B) (i)-(e); (ii)-(a); (iii)-(c); (iv)-(d)

(D) (i)-(d); (ii)-(c); (iii)-(a); (iv)-(e)

Step-by-step solution ► [prepwiser.in/questions/RjPg-Yz_1N](https://www.prepwiser.in/questions/RjPg-Yz_1N)

Answer key — Chemistry in Everyday Life

Numbers match the question numbers above. For full working, open the solution link under each question.

1	B	2	B	3	A	4	B	5	B	6	A	7	B	8	D
9	B	10	A	11	C	12	D	13	B	14	D	15	B	16	A
17	D	18	B	19	C	20	C	21	C	22	A	23	C	24	D
25	3	26	A	27	C	28	C	29	D	30	1	31	B	32	3
33	D	34	A	35	B	36	B	37	D	38	D	39	D	40	C

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