

Fertilizers + Drugs



SAFALTA CLASS<sup>TM</sup>

An Initiative by अमरउजाला

# DELHI POLICE CONSTABLE

---

By

**ONE OF THE MOST EXPERIENCED  
FACULTY TEAM FROM DELHI**

---

**100+ Hrs | 60 Days**

# DELHI POLICE – CONSTABLE - 60 DAYS COURSE

• **LIVE** ONLINE CLASSES

 **60 DAYS** | **100+ HOURS**

**NEW BATCH STARTS 17th AUGUST 2020**

**Session Time - SESSION -1: 3:30 PM TO 4:30 PM & SESSION- 2: 5: 00 - 6:00 PM**

# Course *Benefits*

---

- Live Interactive Classes on Zoom
- Accessible from Desktop or Mobile
- Access to recorded classes
- Weekly mock tests to evaluate progress
- PDF Study material to boost your preparation
- Special Q&A Sessions
- Daily Current Affairs
- Special Vocabulary Sessions
- Dedicated Telegram group
- Personalized Counselling Sessions

**For more details follow the link or Scan the QR Code**

**<https://bit.ly/33MNcpb>**



⇒

# NORMALITY

\*  
No. of gm. equivalent of solute present in 1L solution.

$$N = \frac{[\text{no. of gm. equivalent of solute}]}{\text{Volume of solution (in L)}}$$

$$\frac{98}{24} = \underline{4.08}$$

① 98 gm  $\frac{1}{2}$   $\text{SO}_4$  are mixed in 500ml solution?  
gm. equivalent =  $\frac{98}{49} = \underline{2}$

$$V = 500 \text{ ml}$$

$$= \frac{1}{2} \text{ L}$$

$$\Rightarrow \frac{2}{\frac{1}{2}} = \underline{4}$$

# Mole Concept

At STP:- ✓  
✓ { Standard Temp  $\Rightarrow 273.15 \text{ K}$  or  $0^\circ\text{C}$  }  
Standard Pressure  $\Rightarrow 1 \text{ bar} = 10^5 \text{ Pa}$  }

M = 1 mole of Gas = 22.4 L ✓

e.g.: 44 gm. CO<sub>2</sub> . Find volume of CO<sub>2</sub> at STP?  
44 gm  
 $n = \frac{m}{M} = \frac{44}{44} = 1$   
 $n = 1 \Rightarrow \underline{22.4 \text{ L}}$

$$n = \frac{11}{44} = \frac{1}{4}$$

$$1 \text{ m} = 22.4 \text{ L}$$

$$\frac{1}{4} \text{ m} = \frac{22.4}{4} \text{ L}$$



# FERTILIZERS

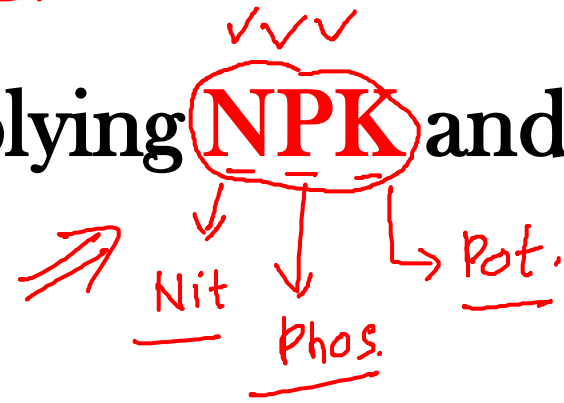


# FERTILIZERS

- Fertilizers increase fertility of soil by supplying **NPK** and other nutrients.

उर्वरक

समृद्ध



➤ NITROGENOUS FERTILIZERS

➤ PHOSPHATIC FERTILIZERS

➤ NP FERTILIZERS

Ⓐ NPK

# NITROGENOUS FERTILIZERS

\* Obtained from → Ammonia ✓ & its derivatives. ✓

e.g.: Ammonium Sulphate, Calcium Ammonium Nitrate,  
Urea. etc.

①  $(\text{NH}_4)_2\text{SO}_4 \Rightarrow 25\%$  Ammonia + Bacteria ⇒ Nitrogen

②  $[(\text{CaNO}_3)_2 \text{NH}_4\text{NO}_3] \Rightarrow 20\%$  N ⇒ Direct used by Plants.

③ Urea ✓ ✓  
 $(\text{NH}_2\text{CO NH}_2) \Rightarrow 46\%$  N ⇒ most used fert.  
m/fert

$$\star \underline{\underline{\text{NH}_3}} \Rightarrow \textcircled{14} + 3 \Rightarrow \textcircled{17}$$

$$\Rightarrow \frac{14}{17} \times 100\% \Rightarrow \frac{1400}{17} = 82.3\% \approx \underline{\underline{82\%}}$$

$$\star \underline{\underline{\text{Urea}}}: - \text{NH}_2 \text{CO NH}_2 \Rightarrow \textcircled{2 \times 14} + \underbrace{2 \times 1}_{\text{H}} + \underline{12} + \underline{16}$$
$$\Rightarrow \underline{\underline{60}}$$

$$\text{N}\% = \frac{28}{60} \times 100\% = \underline{\underline{47\%}}$$

\* Ammonium Sulphate:-  $(\text{NH}_4)_2\text{SO}_4$

$$\Rightarrow \underline{2 \times 14} + \underline{2 \times 4} + \underline{32} + \underline{16 \times 4} \Rightarrow \underline{\underline{132}} = \underline{\underline{132}}$$

$$\begin{aligned} \text{N \%} &= \frac{28}{132} \times 100 \\ &= \underline{\underline{21.2\%}} \end{aligned}$$

# PHOSPHATIC FERTILIZERS

\* Super phosphate of lime, triple super phosphate  
(Bone Ash)  $\text{CaSO}_4$   
& Thomas Slag, KCl,  $\text{KNO}_3$ .

Bone Ash  $\Rightarrow$  P, Ca

# NP FERTILIZERS

✓  
\* Nitrogen + Phosphorus:

⇒ Di hydrogen Ammoniated Phosphate (ADP):-



⇒ N + P

④ ⇒ NPK:- N, K, P. provide

\* Note:- Nitrolim (नाइट्रोलिम)  
mixture ⇒ Ca(CN)<sub>2</sub> + C

⇒ Basic Ca(NO<sub>3</sub>)<sub>2</sub> & (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>  
increase → acidity of soil.

pH ↓ Acidity ↑

# DRUGS

\* Drugs are chemicals of low molecular mass.  
(~ 100 - 5000) ✓

\* Use of chemicals for therapeutic effect is called →  
⇒ Chemotherapy.  
(चिकित्सा) ✓

\* Medicine → Cure the disease, Safe to use, Negligible Toxicity,  
✓ does not cause addiction.

\* Drugs:- Cure the disease → but habit forming.  
addictive. has effect





# TYPES OF DRUGS

① Antipyretics (गर्हनाशक)

⇒ Fever, (Down the body temp.) ↓

⇒ exp:- Aspirin, Paracetamol, Analogen, Phenacetin, Crocin, etc

## ② Analgesics ( पीड़ाहारी ) ( दर्द निवारक )

⇒ Reduce ⇒ Body Pain without any  
mental confusion.

e.g. Aspirin, Paracetamol, Morphine, etc

{ Aspirin ⇒ Acetyl Salicylic Acid }  
⇒ Reduce Body Pain, Fever  
Inflammation  
⇒

1 Morphine: - Narcotic (Addictive) Analgesic

3 Antibiotic :- (यदि जैविक) ✓

\* Prepared from microorganism (Moulds, Fungi --)  
used to inhibit or even to kill other microorganism.

\* First Antibiotic ⇒ Penicilline (Alexander Fleming  
1928)

\* Bacteria Kill Ant. ⇒ Amino glycoside, ~~or~~ ofloxacin ofloxacin

\* SAs terto mycin, chloromycetin etc.

## \* Anti Saptic ( रोगाणुनाशक ) :-

⇒ Prevent Growth of microorganisms & Kill them.

⇒ Not Harmful, Tissues Kill

⇒ ex: Dettol, Boxic Acid, Tincture Iodine

⇒ Sofxamycin, Iodoform.

# \* Anesthesia ( अज्ञेयता )

⇒ These Drugs organ seas the sense organ.

⇒ Major Surgical operations. → (Use)

① First Anesthesia:- ( Diethyl Ether ) ⇒ William Morton  
⇒ 1846.

② Chloroform :- ⇒ James Sampson.

eg.: Diazepam, Nitrous oxide,  
Pentothal Sodium. etc.

⑥ Sulpha Drug: - (Sulphur + Nitrogen)

⇒ prevent ⇒ Bacterial infection.

⇒ 1st Sulpha Drug: - Sulphanilamide (Prepared in 1908)



① Antacids:- Reduce Acidity  $\Rightarrow$  (Stomach)

e.g.:-  $\text{Al}(\text{OH})_3$ ,  $\text{Mg}(\text{OH})_2 \Rightarrow$

{milk of  
magnesia}

$\Rightarrow$  Quinine  $\Rightarrow$  Anti-malarial Drug.  $\Rightarrow$  obtained from  
 $\Downarrow$   
Cinchona bark





















**Don't Forget to Like /  
Comment & Share this  
video**



[www.Youtube.com/safaltaclass](http://www.Youtube.com/safaltaclass)



[www.Facebook.com/safaltaclass](http://www.Facebook.com/safaltaclass)



[www.Instagram.com/safaltaclass](http://www.Instagram.com/safaltaclass)



Google Play  
Store



**SAFALTA**CLASS