

## **chemistry**

### Instructions

- 1.Solve all the questions on sheets.
- 2.Write answers according to marks mention above question.

Questions 1.Give one chemical test to distinguish between the following pairs of compounds.

- (i) Methylamine and dimethylamine    (ii) Secondary and tertiary amines  
(iii) Ethylamine and aniline                (iv) Aniline and benzylamine  
(v) Aniline and N-methylaniline(5)

2.Account for the following.

- (i)  $pK_b$  of aniline is more than that of methylamine.  
(ii) Ethylamine is soluble in water, whereas aniline is not.  
(iii) Methylamine in water reacts with ferric chloride to precipitate hydrated ferric oxide.  
(iv) Although the amino group is  $o$ - and  $p$ - directing in aromatic electrophilic substitution reactions, aniline on nitration gives a substantial amount of  $m$ -nitroaniline.  
(v) Aniline does not undergo Friedel-Crafts reaction.(5)

## **English**

Assignment Ch. Poet & Pancakes class 12th

the key points of the chapter “Poets and Pancakes” (Class 12 English – Flamingo) by Asokamitran:

The chapter is a humorous and satirical account of the author’s experiences at Gemini Studios, a famous film studio in Madras (Chennai).

The title refers to a make-up brand called “Pancake”, which was excessively used on actors, symbolizing artificiality in the film world.

The make-up department was powerful and feared; actors were often turned unnaturally dark or shiny under heavy layers of make-up.

Gemini Studios had a strict hierarchical working culture, where most workers did not clearly understand their roles.

The studio was influenced by leftist (Communist) ideology, though many employees barely understood what communism actually meant.

The author describes the office boy, who believed he was a failed poet and blamed the author for his unfulfilled dreams.

A group of writers called the “Story Department” worked at the studio, but their creative freedom was limited.

The studio often hosted visiting poets and speakers, whose lectures were usually confusing and irrelevant to the staff.

One such visitor was an English poet (Stephen Spender), whose purpose and lecture were largely misunderstood at the time.

Years later, the author realized the identity and significance of the visiting poet after reading an article in The Encounter.

The chapter highlights the gap between art and commerce, and the lack of genuine appreciation for literature in the film industry.

Overall, the lesson offers a critique of the film industry, bureaucracy, and pretentious intellectualism, using irony and gentle humor

Link of Quiz

<https://forms.gle/qzQrMeGS1SzT5JHAA>

## **Biology**

Evolution – Ultra Brief Notes (Class 12)

Evolution: Gradual change in organisms over generations.

Origin of life: Chemical evolution (Oparin–Haldane); supported by Miller–Urey experiment.

Lamarckism: Acquired characters inherited ✗(not accepted).

Darwinism: Natural selection; survival of the fittest.

Mutation theory: Sudden mutations cause evolution.

Modern theory: Mutation + recombination + natural selection + gene flow + genetic drift.

Hardy–Weinberg:  $p^2 + 2pq + q^2 = 1$ ; allele frequency constant.

Speciation: Formation of new species by reproductive isolation.

Evidences: Fossils, homologous organs, embryology.

Adaptive radiation: One ancestor → many species (Darwin's finches).

Human evolution: Origin in Africa; Homo sapiens is modern human.

## **Maths**

General Instructions:

Do all questions neatly in the fair notebook.

Mention Date, and Day on each day's work.

All steps must be shown clearly.

Each question carrying 3 marks.

Part A: Learning Work

Random Experiment

An experiment whose outcome cannot be predicted with certainty.

Example: Tossing a coin, rolling a die.

Sample Space (S)

The set of all possible outcomes of a random experiment.

Example: Tossing a coin →  $S = \{H, T\}$

Event

Any subset of the sample space.

Impossible event: Cannot occur ( $\emptyset$ )

Sure event: Always occurs (S)

Simple event: Only one outcome

Compound event: More than one outcome

Exhaustive Events

Events whose union is the sample space.

Part B : Written Work

1. Three boxes contain balls as follows:

Box I: 2 white, 1 red

Box II: 3 white, 2 red

## **Physics**

Topic – Electrostatics

Dear students please read carefully all the key details of chapter and at the end there is quiz related to topic . it is must to solve all quiz questions .

### 1. Electric Charge

Fundamental property of matter responsible for electric force.

Types: positive and negative

Unit: coulomb (C)

Quantisation of charge:

Conservation of charge: Total charge of an isolated system remains constant.

### 2. Coulomb's Law

Force between two point charges is directly proportional to the product of charges and inversely proportional to the square of distance between them.

### 3. Electric Field

Region around a charge where it experiences electric force.

Defined as force per unit positive test charge.

### 4. Electric Field Intensity

Vector quantity.

Direction is the direction of force on a positive test charge.

### 5. Electric Field Lines

Imaginary lines representing electric field.

Start from positive and end on negative charges.

## 6. Electric Flux

Measure of electric field passing through a surface.

## 7. Gauss's Law

Total electric flux through a closed surface is equal to charge enclosed divided by  $\epsilon_0$ .

## 8. Electric Potential

Work done per unit charge in bringing a test charge from infinity to a point.

## 9. Potential Difference

Difference in electric potential between two points.

## 10. Equipotential Surface

Surface on which electric potential is same at all points.

## 11. Electric Dipole

Pair of equal and opposite charges separated by small distance.

Dipole moment is a vector from negative to positive charge.

## 12. Capacitance

Ability of a conductor to store electric charge.

## 13. Capacitor

System of two conductors separated by an insulator used to store charge.

## 14. Dielectric

Insulating material placed between plates of capacitor to increase capacitance.

## IMPORTANT FORMULAS

Coulomb's Law

Electric Field

Electric Field due to Point Charge

Electric Flux

Gauss's Law

Electric Potential

Potential due to Point Charge

Relation Between E and V

Electric Dipole Moment

Torque on Electric Dipole

Instructions

Students you have to use the following link to start the quiz. After completion of quiz you will get the certificate of participation and grade marks .you have to save it for further assessment in future .

Link of quiz- <https://www.proprofs.com/quiz-school/ugc/story.php?title=ndu1ndgynavmh5>