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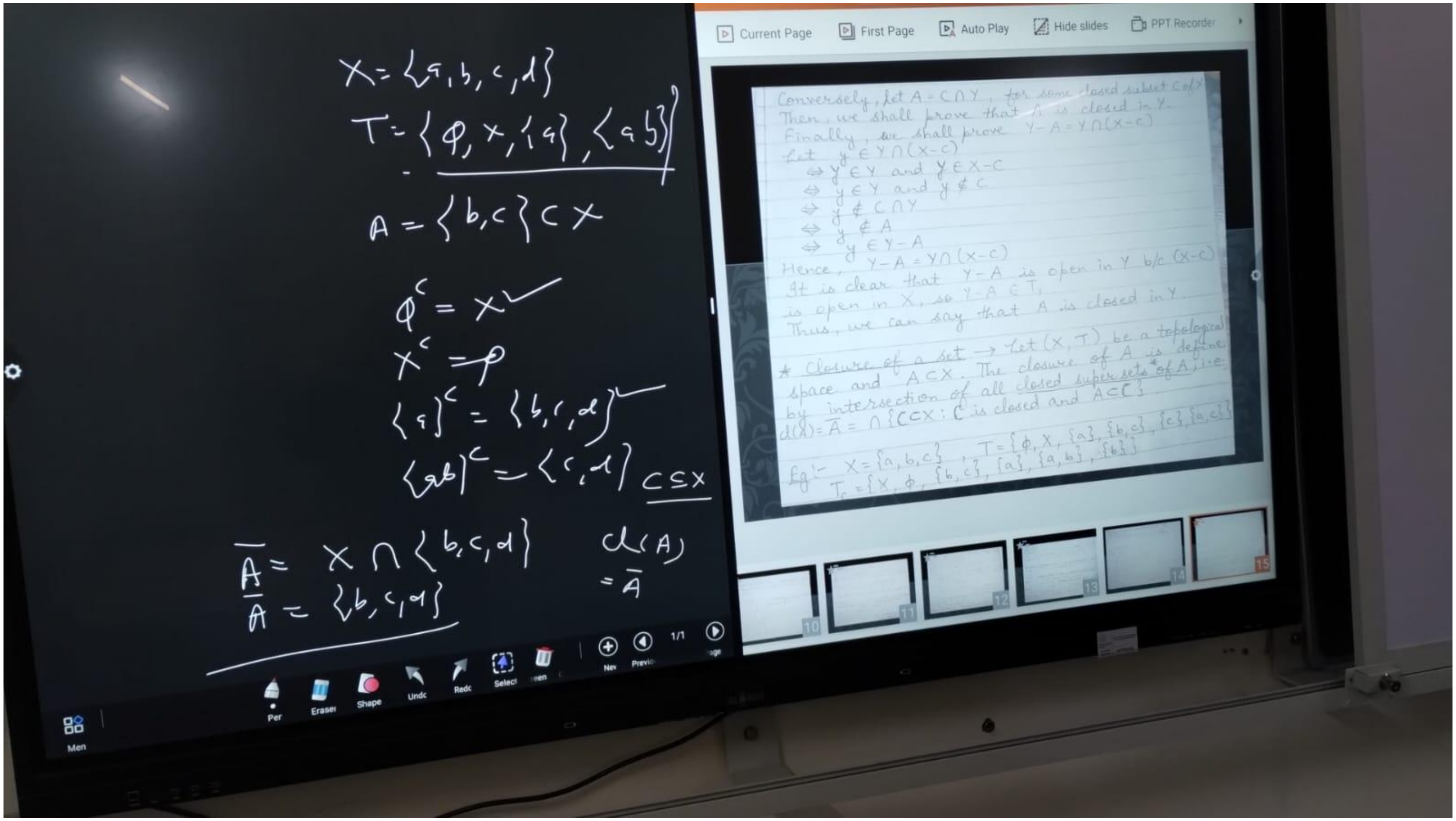
ICT – ENABLED FACILITIES


7. Types of milk
RAW MILK


Composition of Milk
Constituents Percent
Water 87.34%
Fat 3.75%
Milk sugar 4.70%
Casein 3.00%
Albumin 0.40%
Ash 0.75%
Other constituents 0.06%



X = {a, b, c, d}
T = {φ, X, {a}, {a b}}
A = {b, c} ⊂ X
φ^c = X
X^c = φ
{a}^c = {b, c, d}
{ab}^c = {c, d}
C ⊆ X
Ā = X ∩ {b, c, d}
Ā = {b, c, d}
cl(A) = Ā
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Conversely, let A = C ∩ Y, for some closed subset C of X
Then, we shall prove that A is closed in Y.
Finally, we shall prove Y − A = Y ∩ (X − C)
Let y ∈ Y ∩ (X − C)
⇔ y ∈ Y and y ∈ X − C
⇔ y ∈ Y and y ∉ C
⇔ y ∉ C ∩ Y
⇔ y ∉ A
⇔ y ∈ Y − A
Hence, Y − A = Y ∩ (X − C)
It is clear that Y − A is open in Y b/c (X − C)
is open in X, so Y − A ∈ T_Y
Thus, we can say that A is closed in Y.
* Closure of a set → Let (X, T) be a topological space and A ⊂ X. The closure of A is define by intersection of all closed super sets of A, i.e.
cl(A) = Ā = ∩ {C ⊂ X : C is closed and A ⊂ C}
Eg:- X = {a, b, c}, T = {φ, X, {a}, {b, c}}, {c}, {a, c}
T_c = {X, φ, {b, c}, {a}, {a, b}, {b}}


14:05
GPS Map Camera
Gwalior, Madhya Pradesh, India
66RH+M6V, Maa Shitla Puram Colony, Raghavpuram, Laltipara, Gwalior, Madhya Pradesh 474006, India
Lat 26.241608°
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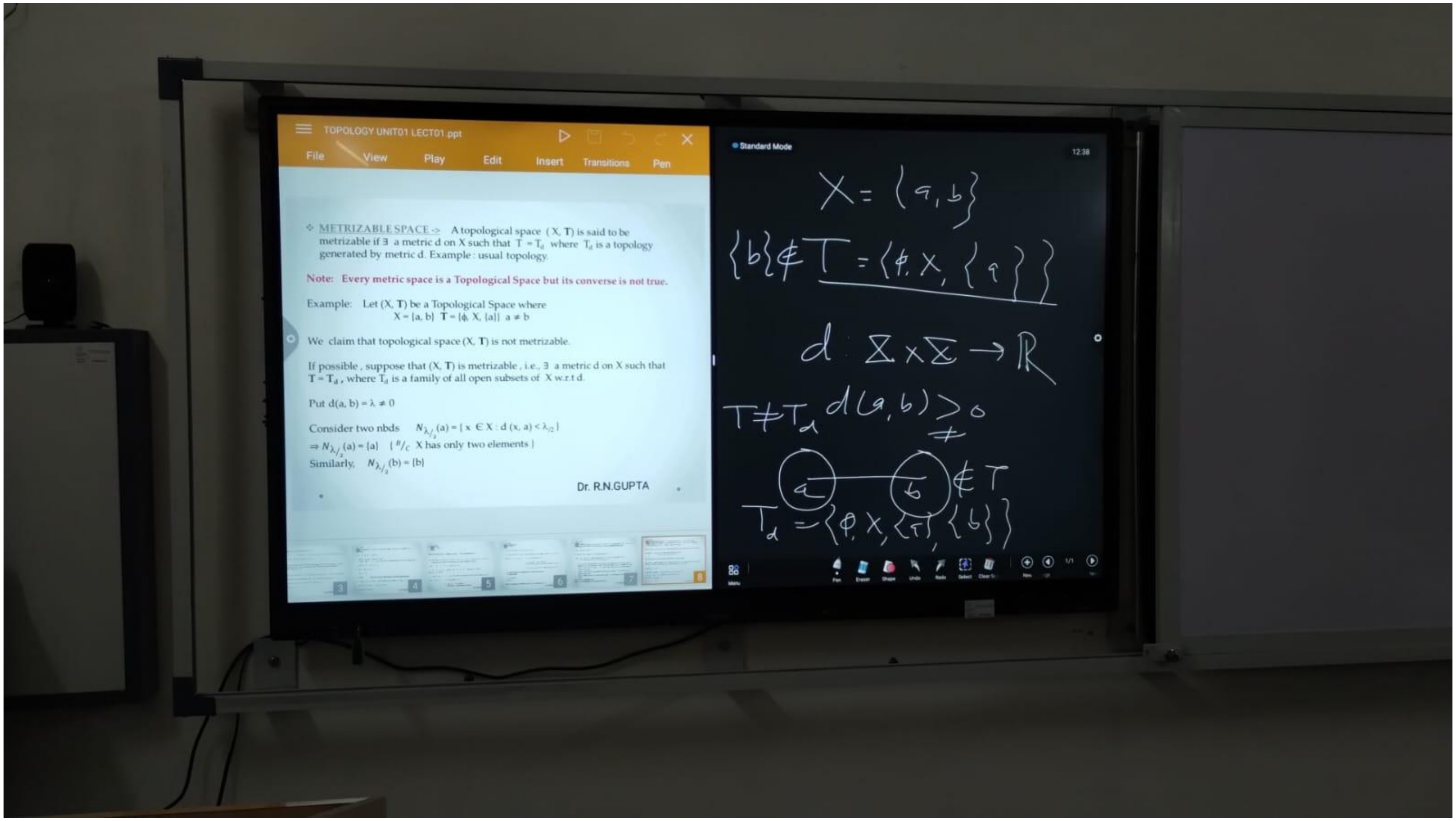

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METRIZABLE SPACE -> A topological space (X, T) is said to be metrizable if ∃ a metric d on X such that T = T_d where T_d is a topology generated by metric d. Example : usual topology.
Note: Every metric space is a Topological Space but its converse is not true.
Example: Let (X, T) be a Topological Space where X = {a, b} T = {ϕ, X, {a}} a ≠ b
We claim that topological space (X, T) is not metrizable.
If possible, suppose that (X, T) is metrizable, i.e., ∃ a metric d on X such that T = T_d, where T_d is a family of all open subsets of X w.r.t d.
Put d(a, b) = λ ≠ 0
Consider two nbds N_λ/2(a) = {x ∈ X : d(x, a) < λ/2}
⇒ N_λ/2(a) = {a} (∵ X has only two elements)
Similarly, N_λ/2(b) = {b}
Dr. R.N.GUPTA
Standard Mode
12:38
X = {a, b}
{b} ∉ T = {ϕ, X, {a}}
d : X × X → ℝ
T ≠ T_d d(a, b) > 0
∉ T
T_d = {ϕ, X, {a}, {b}}