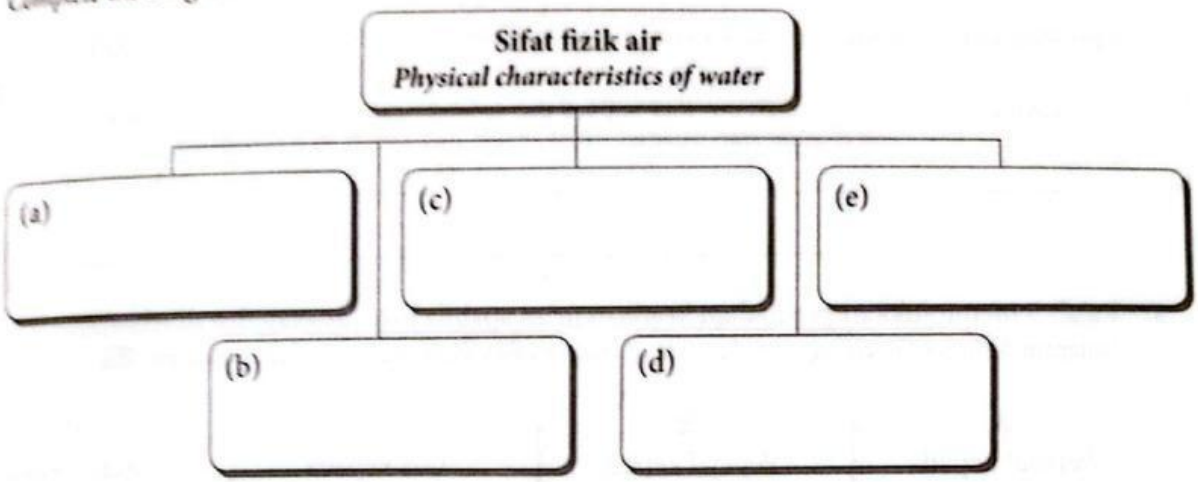
5.1 Sifat Fizik Air
Physical Characteristics of Water

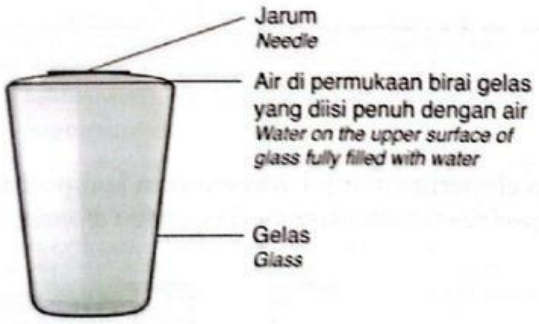
Buku Teks: m.s. 96 – 105

1. Lengkapkan Rajah 1. TP 1
Complete the Diagram 1.



Rajah 1 / *Diagram 1*

2. Ahmad menuang air ke dalam gelas sehingga penuh dan kemudian menitiskan beberapa titis air lagi ke dalam gelas dengan perlahan-lahan. Permukaan air di atas birai gelas membentuk kubah. Ahmad kemudiannya meletakkan sebatang jarum ke atas permukaan air dan jarum tersebut terapung seperti Rajah 2.
Ahmad pours water into the glass until it is full. Then, he drops some more water into the glass slowly. The surface of water near the edge the glass forms a dome. Ahmad then put a needle on the surface of the water and the needle floats as shown in Diagram 2.



Rajah 2 / *Diagram 2*

(a) Jelaskan mengapa permukaan air di atas birai gelas membentuk kubah. TP 3
Explain why the surface of the water near the edge of the glass forms a dome. KBAT Menganalisis

This is due to the water molecules' _____ properties.
The cohesive force is responsible for the surface _____ which is the tendency of liquid's surface to _____ rupture when placed under _____

resist | stress | tension | cohesive

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(b) Jelaskan mengapa jarum yang mempunyai ketumpatan lebih tinggi daripada air boleh terapung. TP3
Explain why the needle that has a higher density than water can float.

KBAT Menganalisis

strider
float

[ ] tension allows [ ] objects, like needles to [ ] on water if they are placed carefully

(c) Berikan dua contoh keadaan yang berlaku disebabkan oleh daya lekitan air dalam alam kita. TP2
Give two examples of conditions that happen due to water cohesive forces in our nature.

Surface
droplets
small

- Water [ ] skates on water
- Water [ ] sticking together on the floor.

3. Rajah 3 menunjukkan perubahan keadaan jirim apabila haba diserap dan dibebaskan. TP1
Diagram 3 shows the changes in the state of matter when heat is absorbed and released.

A	B	C	D
Pepejal kepada cecair *Solid to liquid*	Pepejal kepada gas *Solid to gas*	Gas kepada cecair *Gas to liquid*	Cecair kepada pepejal *Liquid to solid*

Rajah 3 / *Diagram 3*

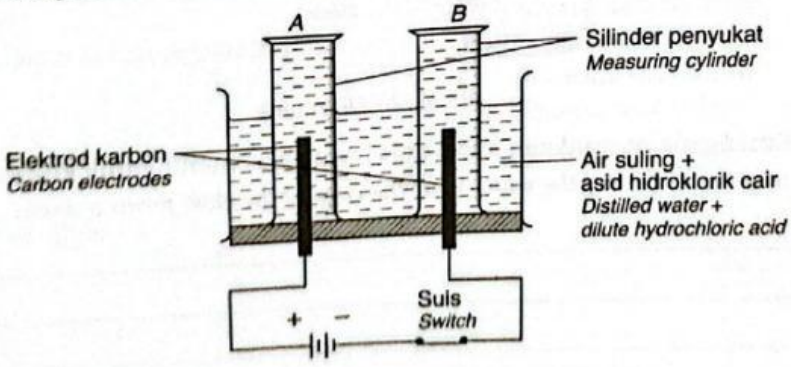
Namakan proses-proses *A*, *B*, *C* dan *D*.
Name the processes A, B, C and D.

A: _____ C: _____

B: _____ D: _____

Komposisi Air
Composition of Water

4. Rajah 4 menunjukkan eksperimen untuk menentukan komposisi air.
Diagram 4 shows an experiment to determine the composition of water.



Rajah 4 / *Diagram 4*

Tentukan **BENAR** atau **PALSU** pernyataan di bawah berdasarkan rajah yang diberikan. TP 2
*Determine **TRUE** or **FALSE** for the statements below based on the diagram given.*

(a) Asid hidroklorik cair ditambah kepada air suling untuk mempercepatkan elektrolisis.
Dilute hydrochloric acid is added to the distilled water to hasten electrolysis.

(b) Semasa elektrolisis, arus elektrik mengalir dari katod ke anod.
During electrolysis, electric current flows from cathode to anode.

(c) Gas yang terhasil di *A* mematikan kayu uji berbara.
The gas that is produced in A extinguished the glowing splinter.

(d) Gas di *B* memberikan bunyi 'pop' apabila diuji dengan kayu bernyala.
The gas in B released a 'pop' sound when tested with lighted splinter.

(e) Gas yang dibebaskan di *B* dua kali ganda lebih banyak daripada di *A*.
The gas that is released in B is double the amount of the gas released in A.

Penyejatan Air
Evaporation of Water

5. Nyatakan faktor-faktor yang mempengaruhi kadar penyejatan. TP 2
State factors affecting the rate of evaporation.

a) Exposed surface area of
b) Surrounding
c)
d) Movement of

Humidity | air | water | temperature

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