

Answer **all** questions in this section  
 Jawab **semua** soalan dalam bahagian ini

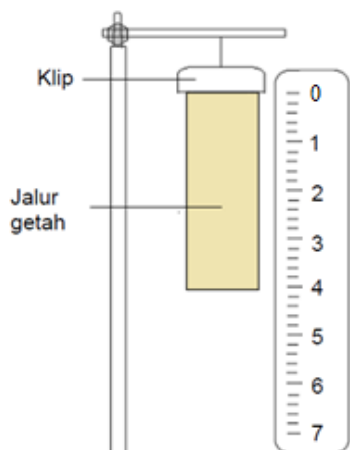
1. An experiment to determine the elasticity of vulcanised or unvulcanised rubber is conducted in lab and diagram 1 below shows the length of vulcanized rubber **before, during** and **after** the experiment when 0.5 kg of weight is removed

*Satu eksperimen untuk menentukan kekenyalan getah ter Vulkan dan getah tak ter Vulkan di jalankan di dalam makmal dan rajah 1 di bawah menunjukkan panjang jalur getah ter Vulkan **sebelum eksperimen, semasa** pemberat digantung dan **selepas** 0.5kg pemberat dialihkan.*

### EXPERIMENT 1

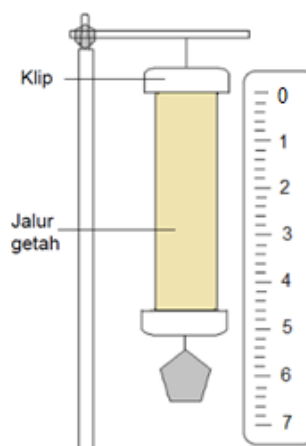
#### VULCANISED RUBBER JALUR GETAH TERVULKAN

##### BEFORE EXPERIMENT SEBELUM EKSPERIMEN



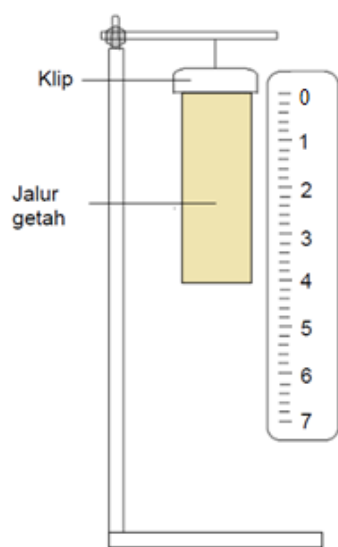
Panjang : ..... cm

##### DURING THE EXPERIMENT SEMASA EKSPERIMEN



Panjang : ..... cm

**AFTER EXPERIMENT  
SELEPAS EKSPERIMEN**



Panjang : ..... cm

Diagram 1  
*Rajah 1*

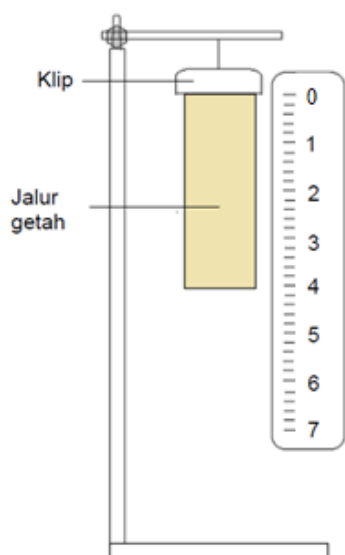
Diagram 2 below shows the length of unvulcanized rubber **before, during** and **after** the experiment when weight is removed

*Rajah 2 di bawah menunjukkan panjang jalur getah tak ter Vulkan **sebelum eksperimen, semasa pemberat digantung dan selepas pemberat dialihkan.***

## EXPERIMENT 2

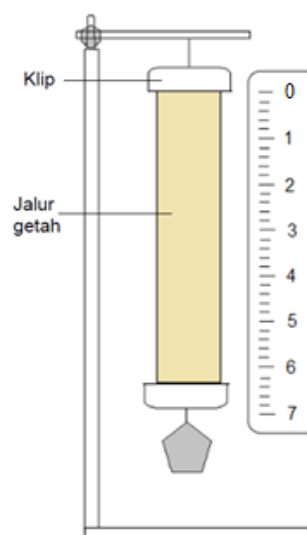
### UNVULCANISED RUBBER JALUR GETAH TAK TERVULKAN

#### BEFORE EXPERIMENT SEBELUM EKSPERIMEN



Panjang : ..... cm

#### DURING THE EXPERIMENT SEMASA EKSPERIMEN



Panjang : ..... cm

**AFTER EXPERIMENT  
SELEPAS EKSPERIMEN**

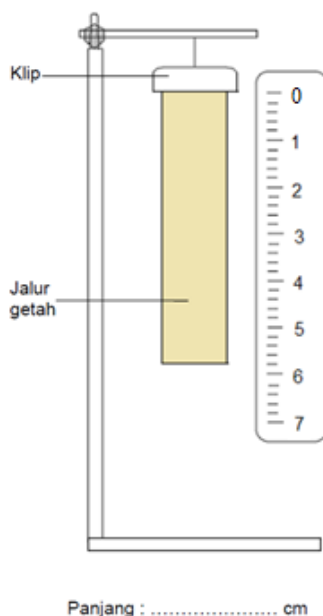


Diagram 2  
Rajah 2

- (a) Measure the length of each rubber strip and record at the spaces provided in diagram above  
*Ukur panjang setiap jalur getah dan rekod bacaan di ruangan yang disediakan dalam rajah di atas*
- [3 marks]
- (b) Construct a table to record the rubber strips before the weight is hanged, during the weight is hanged and after the weight is removed  
*Bina satu jadual untuk merekodkan panjang setiap jalur-jalur getah sebelum pemberat digantungkan, semasa pemberat digantung dan selepas pemberat dialihkan juga pemanjangan setiap jalur.*
- [3 marks]

- (c) (i) State **one** observation for this experiment  
*Nyatakan **satu** pemerhatian bagi eksperimen ini*

.....  
.....  
.....

[3 marks]

- (ii) Base on the observation in answer in (c)(i), state one inference in this experiment  
*Berdasarkan pemerhatian dalam (c), berikan **satu** inferens untuk eksperimen ini.*

.....  
.....  
.....

[3 marks]

- (d) In this experiment, state  
*Bagi eksperimen ini, nyatakan;*

- (i) manipulated variable  
*Pembolehubah dimanipulasi*

.....

- (ii) Responding variable  
*Pembolehubah bergerak balas.*

.....

- (iii) Fixed variable  
*Pembolehubah dimalarkan.*

.....

[3 marks]

- (e) State **one** hypothesis for this experiment  
*Nyatakan **satu** hipotesis untuk eksperimen ini.*

.....  
 .....  
 .....

[3 marks]

- (f) State the operational definition for the elasticity of rubber strip  
*Nyatakan definisi secara operasi bagi kekenyalan jalur getah.*

.....  
 .....  
 .....

[3 marks]

- (g) The mass of weight must be constant because it will affect the length of rubber during experiment. State the relationship between the mass of weight hanged to the vulcanised rubber strip with the length of rubber strip  
*Jisim pemberat mesti ditetapkan kerana ia akan mempengaruhi panjang getah semasa eksperimen. Nyatakan hubungan diantara jisim pemberat digantungkan pada getah tervulkan dengan panjang jalur getah*

.....  
 .....  
 .....

[3 marks]

- (h) Predict the length of vulcanised rubber after the experiment if 1 kg of weight was hanged to the vulcanised rubber.  
*Ramalkan panjang getah tervulkan selepas eksperimen, jika pemberat sebanyak 1 kg di gantung di getah tervulkan*

.....

[3 marks]

- (i) A list of substance is given in diagram below.  
*Satu senarai bahan diberi seperti rajah di bawah*

- Hydrochloric acid / *asid hidroklorik*
- Sodium hydroxide solution /  
*larutan natrium hidroksida*
- acetic acid / *asid asetik*
- ammonia solution / *larutan ammonia*

Classify the substance that **coagulate latex** and substance that **does not coagulate latex**

*Klasifikasikan bahan yang menggumpalkan susu getah dan yang tidak menggumpalkan susu getah*

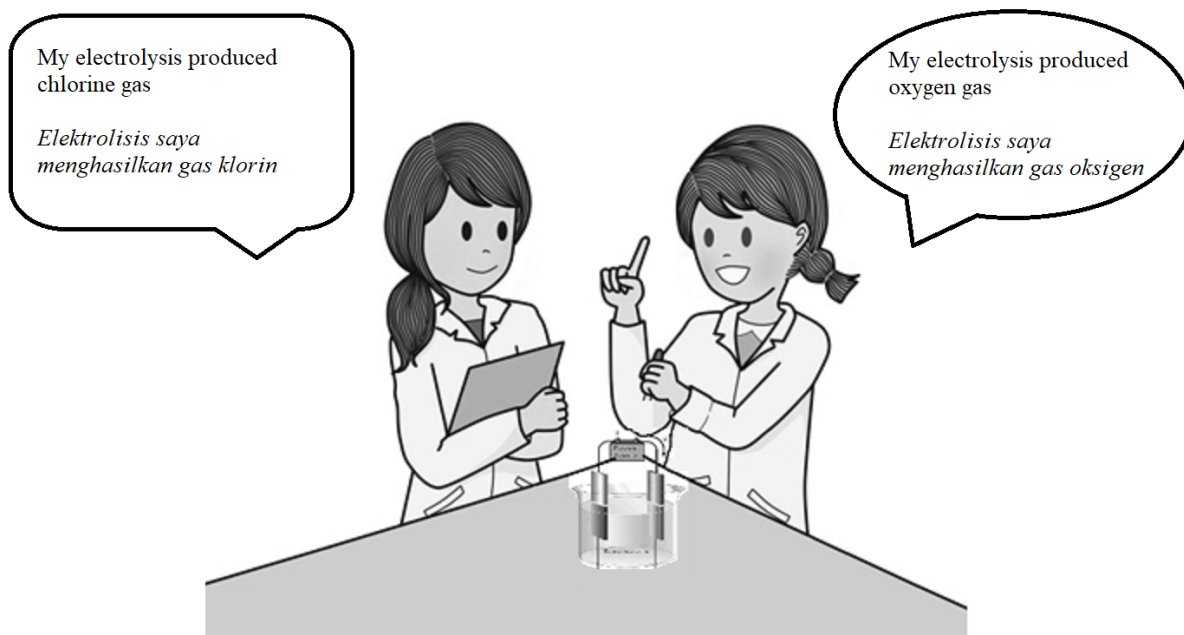
[3 marks]

- (j) Draw a diagram to shows the strength in the molecules in vulcanised rubber  
*Lukiskan suatu rajah untuk menunjukkan kekuatan molekul getah tervulkan*

[3 marks]

2. The following conversation takes place in a class room after the students have done electrolysis of sodium chloride solution with different concentration experiment in lab at school

*Perbualan tersebut telah berlaku di dalam kelas selepas pelajar telah melakukan eksperimen elektrolisis larutan natrium klorida dengan kepekatan yang berbeza di makmal di sekolah*



Based on situation above, plan an experiment to study the effect of concentration of named electrolyte to the product of electrolysis at anode. The planning must include the following aspects:

*Berdasarkan situasi tersebut, rancang satu eksperimen makmal untuk mengkaji kesan kepekatan elektrolit yang dinamakan terhadap hasil elektrolisis di anod. Perancangan anda hendaklah mengandungi aspek-aspek berikut:*

- (a) Problem statement  
*Penyataan masalah*
- (b) All the variables  
*Semua pemboleh ubah*
- (c) Hypothesis  
*Hipotesis*
- (d) List of materials and apparatus  
*Senarai bahan dan radas*



- (e) Procedure  
*Prosedur*
- (f) Tabulation of data  
*Penjadualan data*

[17 marks]

**END OF QUESTIONS**  
**SOALAN TAMAT**