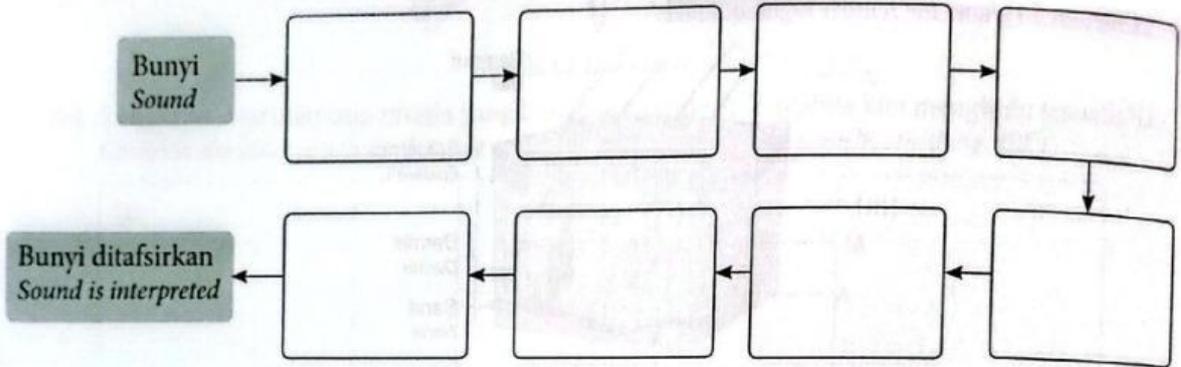
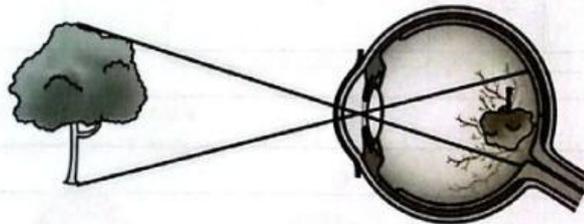


7. Lengkapi carta berikut mengenai mekanisme pendengaran manusia. **TP 2**
 Complete the following chart on the mechanism of hearing in humans.

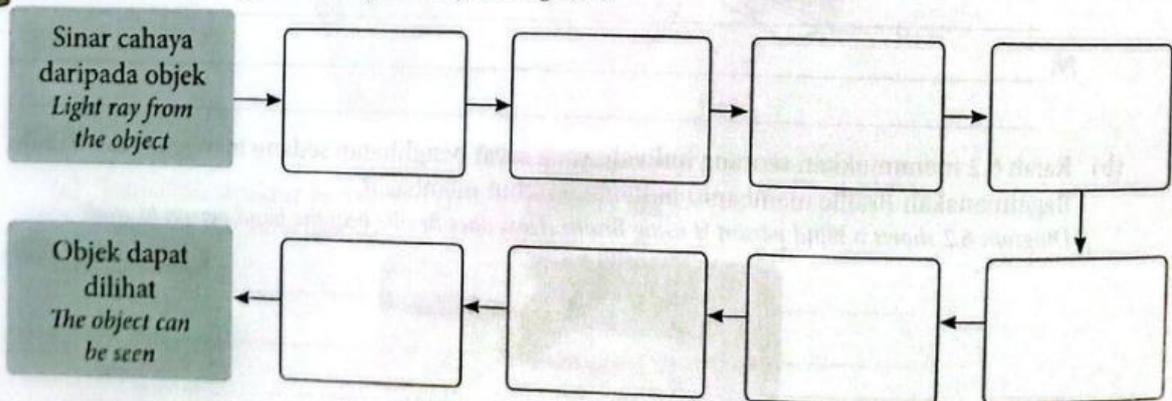


8. Rajah 7 menunjukkan mekanisme penglihatan manusia.
 Diagram 7 shows the mechanism of sight in humans.



Rajah 7 / Diagram 7

(a) Berdasarkan Rajah 7, lengkapi carta berikut. **TP 2**
 Based on Diagram 7, complete the following chart.

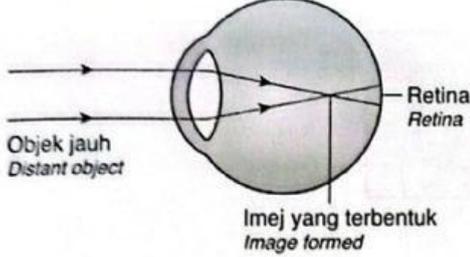
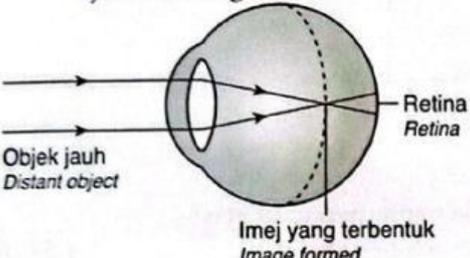
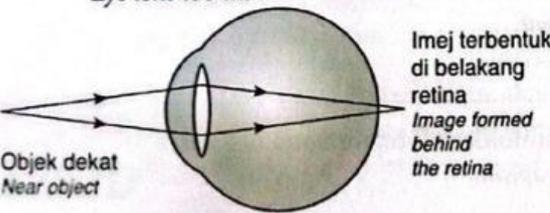
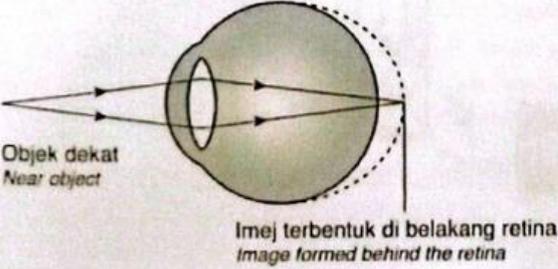


(b) Apakah ciri-ciri imej yang terbentuk pada retina? **TP 2**
 What are the characteristics of the image formed on the retina?

9. Bagaimanakah kecacatan penglihatan boleh dibetulkan? Lakarkan jawapan anda dalam ruang yang disediakan. (10)

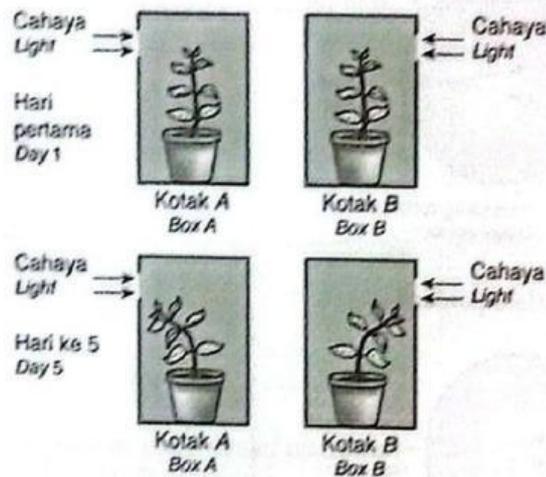
How can the visual defects be corrected? Sketch your answer in the space given.

KBAT Mengaplikasi

Kecacatan penglihatan <i>Defect of sight</i>	Kaedah pembetulan <i>Correction method</i>
<p>(a) Rabun jauh yang disebabkan oleh: <i>Short-sightedness that is caused by:</i></p> <p>(i) Kanta mata terlalu tebal <i>Eye lens too thick</i></p>  <p>(ii) Bebola mata terlalu panjang <i>Eyeball too long</i></p> 	
<p>(b) Rabun dekat yang disebabkan oleh: <i>Long-sightedness that is caused by:</i></p> <p>(i) Kanta mata terlalu nipis <i>Eye lens too thin</i></p>  <p>(ii) Bebola mata terlalu pendek <i>Eyeball too short</i></p> 	

Bab 1

1. Rajah 1 menunjukkan dua batang tumbuhan, tumbuhan A dan B yang diletakkan di dalam kotak bagi mengkaji rangsangan dan gerak balas tumbuhan terhadap cahaya. Pada hari ke-lima, pucuk tumbuhan A dan B kedua-duanya didapati mencondong ke arah lubang pada kotak.
Diagram 1 shows two plants, plant A and B that were placed in the boxes to investigate the stimuli and responses of plants towards light. On the 5th day, the shoots of both plant A and B were found slanted towards the hole on the boxes.



Rajah 1 / Diagram 1

- (a) Apakah kesimpulan yang boleh dibuat daripada pemerhatian di atas?
What is the conclusion that can be drawn from the observation above?

KBAT Menilai

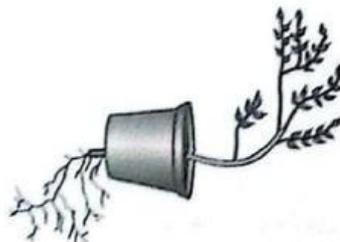
The plant show positive by growing towards the source.

- (b) Berikan pemboleh ubah dimanipulasikan dalam eksperimen ini. (12)
Give the manipulated variable in this experiment.

- (c) Bahagian tumbuhan yang manakah menunjukkan fototropisme negatif?
Which part of the plant shows negative phototropism?

KBAT Mengaplikasi

2. Rajah 2 menunjukkan gerak balas tumbuhan terhadap graviti.
Diagram 2 shows the response of a plant towards gravity.



Rajah 2 / Diagram 2

(a) Berdasarkan Rajah 2, nyatakan bahagian tumbuhan yang menunjukkan: **(K2)**
Based on Diagram 2, state the part of the plant that shows:

(i) geotropisme negatif/ *negative geotropism*

(ii) geotropisme positif/ *positive geotropism*

(b) Apakah kepentingan geotropisme positif dan geotropisme negatif kepada tumbuhan?
What is the importance of positive geotropism and negative geotropism to plants? **(KBAT)** Mengaplikasi

Positive geotropism - allowing the _____ to grow further into the _____ to _____ the plant

_____ anchor _____ light _____ photosynthesis _____ respiration _____ roots _____ soil _____

Negative geotropism - allowing plants to get oxygen for _____, and carbon dioxide and _____ for _____

3. Nyatakan sama ada pernyataan di bawah BENAR atau PALSU. **(TP1)**
State whether the statements below are TRUE or FALSE.

Pernyataan <i>Statement</i>	BENAR/ PALSU <i>TRUE/ FALSE</i>
(a) Hidrotropisme negatif membolehkan tumbuhan mendapatkan cahaya matahari. <i>Negative hydrotropism allows plants to get sunlight.</i>	
(b) Hidrotropisme positif membolehkan akar mendapatkan air untuk menjalankan proses fotosintesis. <i>Positive hydrotropism allows roots to get water to carry out photosynthesis.</i>	
(c) Tigmotropisme positif membolehkan akar mengelak daripada objek yang menghalangnya daripada mendapatkan air. <i>Positive thigmotropism allows roots to avoid objects that prevent it from reaching for water.</i>	
(d) Gerak balas nastik tidak bergantung pada arah rangsangan. <i>Nastic movement does not rely on the direction of the stimuli.</i>	
(e) Tigmotropisme dan gerak balas nastik ialah dua jenis gerak balas tumbuhan terhadap sentuhan. Walau bagaimanapun, tigmotropisme berlaku lebih lambat daripada gerak balas nastik. <i>Thigmotropism and nastic movement are two types of responses of plants to touch. However, thigmotropism occurs slower than the nastic movement.</i>	
(f) Gerak balas nastik dalam pokok semalu bertindak sebagai pertahanan daripada musuh dan angin yang kuat. <i>The nastic movement of the Mimosa sp. acts as a defence against enemies and strong wind.</i>	

1. Lengkapkan jadual di bawah mengenai perbezaan antara penglihatan stereoskopik dengan penglihatan monokular.

Complete the table below on the differences between stereoscopic and monocular visions. **KBAT** Menganalisis

Penglihatan stereoskopik <i>Stereoscopic vision</i>	Aspek <i>Aspects</i>	Penglihatan monokular <i>Monocular vision</i>
(a)	Lokasi mata <i>Location of the eyes</i>	(b)
(c)	Medan penglihatan <i>Field of vision</i>	(d)
(e)	Jenis haiwan <i>Type of animal</i>	(f)

2. Padankan haiwan berikut dengan julat frekuensi pendengaran yang betul. **TP2**

Match the following animals with the correct range of hearing frequency.

Haiwan <i>Animal</i>	Julat frekuensi pendengaran (Hz) <i>Hearing frequency range (Hz)</i>
(a) Tikus <i>Mouse</i>	(i) 450 – 50,000
(b) Singa laut <i>Sea lion</i>	(ii) 40 – 100,000
(c) Kelawar <i>Bat</i>	(iii) 200 – 80,000
(d) Anjing <i>Dog</i>	(iv) 67 – 45,000
(e) Gajah <i>Elephant</i>	(v) 2000 – 110,000
(f) Dolfin <i>Dolphin</i>	(vi) 16 – 12,000